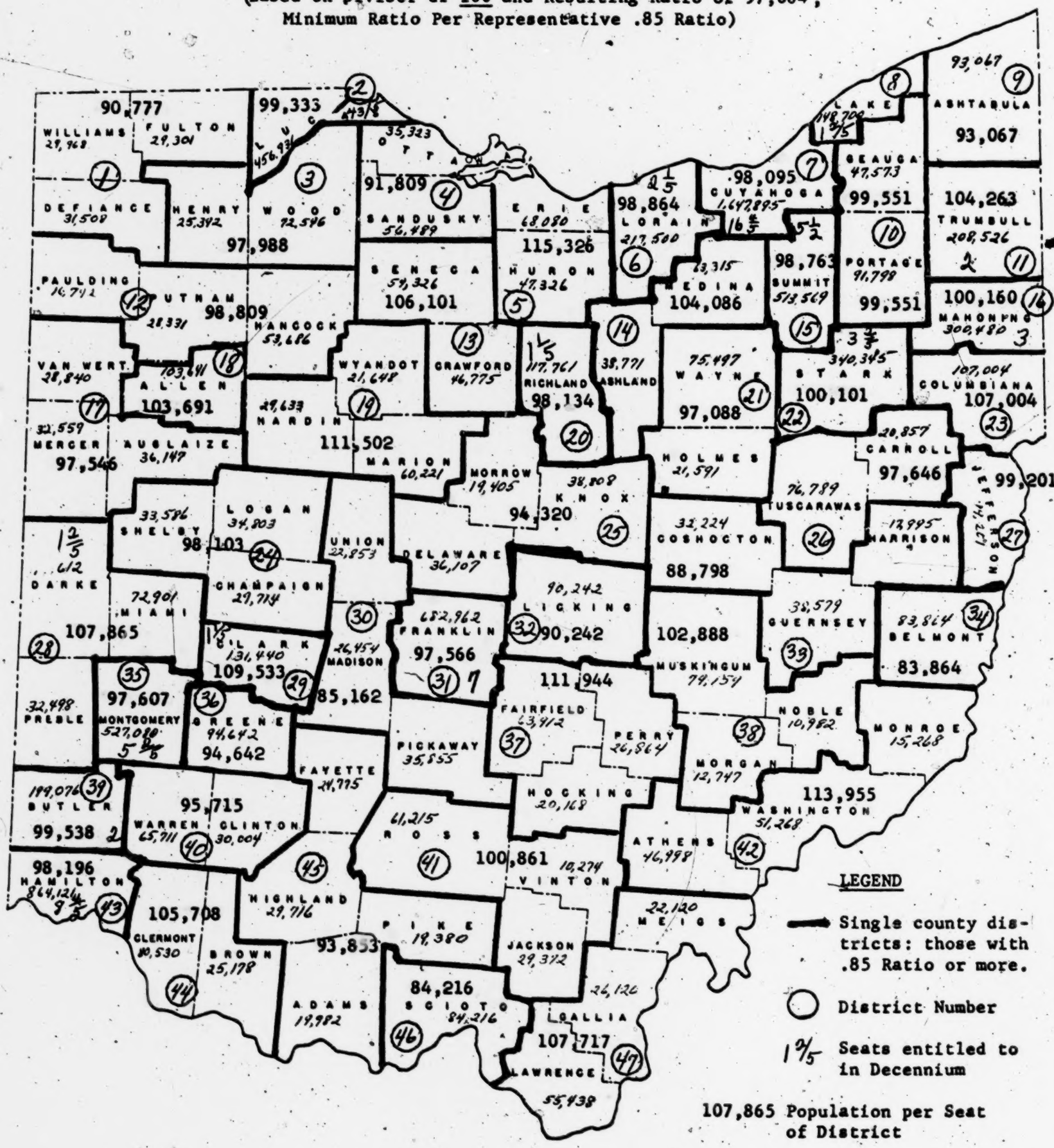
APPENDIX MAP I

REAPPORTIONED OHIO HOUSE
Seats and Populations of House Districts

(Based on Divisor of 100 and Resulting Ratio of 97,064,
Minimum Ratio Per Representative .85 Ratio)



IN THE

Supreme Court of the United States

OCTOBER TERM, 1965

No. .....

JAMES D. NOLAN,

Appellant,

vs.

JAMES A. RHODES, GOVERNOR OF OHIO, ET AL.,

Appellees.

JURISDICTIONAL STATEMENT

On Appeal from the United States District Court for the Southern District of Ohio

OPINION BELOW

Appellant appeals from a judgment of a three-judge United States District Court for the Southern District of Ohio entered on October 27, 1965, wherein said court adopted an apportionment plan for the Ohio House of Representatives and the Ohio Senate.

The opinion of the three-judge court has not yet been officially reported and is set forth in Appendix A hereof.

JURISDICTION

On October 27, 1965, the three-judge court adopted a reapportionment plan for the legislature of Ohio. On November 4, 1965, the notice of appeal to this Court was filed in the consolidated cases in the district court.

Jurisdiction of this Court to review on direct appeal is conferred by 28 U.S.C. 1253, and is demonstrated by the cases of *Baker v. Carr*, 369 U.S. 186; *Reynolds v. Sims*, 377 U.S. 533 and the other state reapportionment cases decided on June 15, 1964.

QUESTIONS PRESENTED

1. When a State Constitution details specifically the method of apportionment of the legislature, and said method, minus only the 12 words which clearly violate the Federal Constitution would provide an apportionment within the requirements of the Federal Constitution, is a federal court authorized to order the adoption of a new plan for apportionment which not only disregards the state constitution and long established state policy, but also terminates senatorial tenure in mid-term, confuses residency requirements, and attempts to create legislative districts out of no longer existing political subdivisions?

2. Where a state constitution minus sections which violate the federal constitution would result in the next election of a House of Representatives, the majority of which is elected by 48% of the people and having a maximum population variance of 1.7 to 1 and a Senate, the majority of which is elected by 45.9% of the people and having a maximum population variance of 1.8 to 1, is a three-judge federal court empowered to disregard the state constitution and order the adoption of a plan ignoring the state constitution and state policy?

3. Has the plaintiff in a state legislative apportionment case been denied due process of law if the three-judge fed-

eral court has refused and failed to hold a hearing, and has made determinations without presentation of evidence, and has abdicated its judicial function in favor of state executive officers?

4. When the articulated, long-standing policy of the state has been to follow county lines in legislative apportionment in order to prevent gerrymandering, may the trial court arbitrarily ignore county lines when equality among voters as required under the federal constitution could be achieved without cutting county lines?

5. Whether the mandate of this court in 378 U.S. 556 which involved only the lower house of the Ohio legislature has been followed if, subsequent to remand, the trial court which had previously found Ohio's upper house to be "properly apportioned according to population," finds, without benefit of an adversary proceeding, that the same upper house, in the identical circumstances "has not been apportioned substantially on a population basis?"

6. Whether the mandate of this court in this case in 378 U.S. 556 has been followed if the trial court has failed to "accommodate the relief ordered to the apportionment provisions of state constitutions insofar as is possible" (*Reynolds v. Sims*, 377 U.S. 533 at 583) but to the contrary has completely ignored the Ohio Constitution even though complete relief and an apportionment meeting federal constitutional standards could have been provided within the existing state constitutional framework?

CONSTITUTION AND STATUTES INVOLVED

The questions presented involve Section 1 of the Fourteenth Amendment to the Constitution of the United States, Article XI of the Constitution of the State of Ohio, and 28 U.S.C. 1343. Article XI of the Ohio Constitution is set forth as Appendix B.

INTRODUCTION

Aside from its constitutional rationale, *Baker v. Carr*, 369 U.S. 186, was an historical necessity since by mid-century the legislative malapportionment prevalent in virtually every state was frustrating the democratic ideal of equal representation and threatening the very nature of representative government.

In implementing *Baker v. Carr*, this Court, ever mindful of the delicate balance of the federal-state relationship, posted a large warning sign in *Reynolds v. Sims*, 377 U.S. 533, and instructed trial courts in apportionment cases to:

> "... accommodate the relief ordered to the apportionment provisions of state constitutions insofar as is possible." (377 U.S. at 584)

The previous appeal to this Court of this case, *Nolan v. Rhodes*, 378 U.S. 556, June 22, 1964, was from the trial court's dismissal of appellant's complaint attacking the so-called Hanna Amendment proviso to the apportionment provisions of the Ohio Constitution. (The proviso, in full, read "Provided however that each county shall have one representative." Article XI, Section 2, Ohio Constitution.) That proviso, appellant claimed, subverted the population-based apportionment formula of the Ohio Constitution of 1851, the basic law of Ohio today. The relief sought was simply the invalidation of the proviso and an apportionment in accordance with the original formula which remained intact in Article XI of the Ohio Constitution. Thus, appellant was seeking relief perfectly accommodated to the existing Ohio Constitution.

The trial court, on remand, has ignored this Court's warning and has proceeded to effect wholesale changes in Ohio constitutional provisions and in the basic apportionment policy of Ohio in matters irrelevant to the question of equal representation.

The power to apportion is the power to affect the basic nature of representative government and unless the exercise of the power is restrained by specific, well defined limitations and guidelines, it will be, as history demonstrates, subject to the most extreme abuses.

The State of Ohio had such guidelines for apportionment expressed in its state constitution which, with very minor adjustments, would have complied completely with federal constitutional requirements. The trial court, however, rather than following the mandate of this Court in the instant case has embarked on a program of wholesale revisions and amendments to the state constitution which threatens to create the kind of chaos and confusion in Ohio that other states have experienced when the principle of equal representation is used to achieve other political goals.

This case is important then because it raises the vital question of the extent to which a federal district court may alter or ignore state constitutions and basic state policy on election matters when the trial court's only legitimate object, equal representation, can be achieved completely within the framework of existing state constitutional provisions.

Unless that question is answered by this Court there is great danger that lower courts will continue to unnecessarily sacrifice other basic principles of fair and equitable representation while paying only lip service to *Reynolds v. Sims*.

The appellant will demonstrate that in the instant case the trial court not only failed "to accommodate the relief ordered to the apportionment provisions" of the Ohio Constitution but, incredible as it may seem, failed and refused to even make an inquiry to determine whether it was possible to do so.

STATEMENT AND ARGUMENT

History of the Case

This action was commenced on April 5, 1961, and sought only a declaration of invalidity of a nine word proviso in Article XI, Section 2, of the Ohio Constitution which proviso appellant claimed created a disparity of voting strength in electing members of Ohio's lower house and consequently deprived appellant of equal protection of law.

That proviso, commonly referred to in Ohio as the "Hanna Amendment," a living memorial to the political power of Mark Hanna, reads as follows:

> "Provided however, that each county shall have one representative."

It was appellant's contention that the adoption of this proviso in 1903 subverted Ohio's unique apportionment system represented by Article XI of the Constitution of 1851.

Appellant pointed out that fair representation could be restored to Ohio by the deletion of the Hanna Amendment which would leave intact a complete, self-executing system of reapportionment, which in its recognition of the relevant factors in an apportionment system, anticipated by one hundred and thirteen years this Court's action in *Reynolds v. Sims*, 377 U.S. 533.

The Ohio system was uniquely designed to provide fair representation in proportion to population and it was only the subsequent addition of the Hanna Amendment in 1903 which frustrated that design.

In fact, with its recognition of the growth and shift of population, its built-in protection against gerrymandering, its maintenance of political subdivisions as representational units, its provision for automatic, periodic reapportionment, its recognition of population as the sole basis of ap-

portionment, Article XI could very well have been fashioned to meet the guidelines of *Reynolds v. Sims.*

Accordingly, appellant, throughout this litigation, laid great stress on the fact that complete relief could be afforded within the existing framework of the Ohio Constitution simply by striking out the few words which created the voting disparities.

The trial court, however, in its initial decision in *Nolan v. Rhodes,* 218 F. Supp. 953, dismissed the complaint stating that "It was not irrational to allow one representative for each county." The only issue pleaded, briefed or argued before the trial court, and the only issue briefed in the appeal to this Court was the validity of the Hanna Amendment proviso.

On June 22, 1964, this Court reversed and "remanded for further proceedings consistent with the views stated in our opinions in *Reynolds v. Sims* and in the other cases relating to state legislative apportionment along with Reynolds." *Nolan v. Rhodes,* 378 U.S. 556.

It is the contention of the appellant that the trial court's further proceedings not only were not "consistent with the views stated," in *Reynolds v. Sims,* but were, to the contrary, in complete disregard of those views.

THE QUESTIONS PRESENTED BY THIS APPEAL ARE SUBSTANTIAL

Baker v. Carr, 369 U.S. 186, promised welcome judicial relief from the malapportionment which had infected virtually all the state legislative bodies. A decent regard for the democratic process required no less than that a state be required to:

> "... make an honest and good faith effort to construct districts in both Houses of its legislature, as nearly of equal population as is practicable." *Reynolds v. Sims,* 377 U.S. 577.

This not surprising rule should not be used by lower federal courts, as it has been by the trial court in this case, as an open invitation to rewrite state constitutions and to effect changes in state policy not necessary or relevant in complying with *Reynolds v. Sims.*

Equal representation has been long overdue in our state legislatures, but it is not necessary to sacrifice every other principle of sound and fair legislative representation in order to achieve that equality. Further clarification from this Court is needed so that lower courts can not use the reapportionment cases to achieve other political goals.

A short history of apportionment in Ohio and a review of this litigation will demonstrate that the questions presented by this appeal are substantial and that the action of the trial court subsequent to remand has been inconsistent with the views of this Court as stated in *Reynolds v. Sims* and the other state legislative apportionment cases decided along with *Reynolds.*

The overriding objectives of apportionment in Ohio since 1851 have been population-based apportionment, within county lines and a mixed system of single and multiple member districts to prevent gerrymandering.

History of Apportionment in Ohio

Even before Ohio became a state its inhabitants were entitled to representation in the territorial legislature on a population only basis (Article II of the Articles of Compact of the Ordinance of the Northwest Territory of 1787.)

Upon admission of Ohio into the Union, representation in both houses continued to be based solely on population (Ohio Constitution of 1802, Sections 2 and 6). This constitutional guaranty of numerical equality in representation was in fact honored, but nevertheless apportionment of the Ohio Legislature was completely unsatisfactory in the first

half of the nineteenth century since no standards other than equality were prescribed and the apportionment power in the hands of the state legislature became a politician's dream and a voter's nightmare.

For example, the Ohio Supreme Court, in 1853, commenting on the failure of the apportionment system under the constitution of 1802 said:

> "The State has been subjected to a most humiliating experience, while the power was left with the General Assembly and the scenes of anarchy and confusion, which had marked its exercise there, undoubtedly determined the people to deprive that body of it absolutely, so far as the election of their own members was concerned for the future." *State ex rel. Dudley v. Evans*, 1 O.S. 422, 443 (1853).

Thus when they came to consider legislative apportionment in the constitution of 1851, the people of Ohio made several basic policy decisions:

1. The apportionment formula should be spelled out in the constitution.

2. The application of the formula should be a ministerial function only, leaving virtually no discretion to those who were to apply the formula.

3. Reapportionment should occur every ten years following the federal census.

4. Counties should be preserved as units of representation with provision for creating legislative districts out of two or more whole counties in the more sparsely populated areas of the state.

5. Under no conditions were county lines to be crossed in creating districts.

6. The basis of representation in both houses was to be population only.

7. The relatively insignificant disparities in representation that necessarily resulted from the maintenance of

county lines were to be balanced out by providing for additional representatives or senators in one or more sessions during the decennium for the population in excess of the so-called ratio of representation.

8. A system of single member districts was carefully considered and rejected. Adopted instead was a system providing for both single member and multi-member districts, depending solely on population, with the representatives from the multi-member districts to be elected at large.

To accomplish these goals and to effectuate these policies the constitutional convention proposed what eventually became Article XI of the Constitution of 1851, a unique, farsighted apportionment provision, which until its subversion by the Hanna Amendment in 1903, could have served as a model apportionment plan following virtually every guideline suggested by this Court in *Reynolds* and the other apportionment cases. With the deletion of the Hanna Amendment and with one additional minor deletion, federal constitutional standards would be completely followed within the traditional framework of Ohio's basic law and policy in regard to apportionment.

The Floating Fraction Improves A Decennial Apportionment

Article XI, Section 3, provides:

> "When any county shall have a fraction above a ratio, so large, that being multiplied by five, the result will be equal to one or more ratios, additional representatives shall be apportioned for such ratios, among the several sessions of the decennial period, in the following manner: If there be only one ratio, a representative shall be allotted to the fifth session of the decennial period; if there are two ratios, a representative shall be allotted to the fourth and third sessions, respectively; if three, to the third, second and first sessions, respectively; if four, to the fourth, third, second and first sessions, respectively."

The same formula for senatorial fractions is set out in Section 6a.

This Court, in *Reynolds*, 377 U.S. at 580, has recognized that deviations from equality may be justified by a desire to maintain political subdivisions as representative units and that decennial reapportionment is a rational approach to adjustment of representation, 377 U.S. at 583.

Therefore, it can hardly be argued that the so-called fractional representation provided by Sections 3 and 6a violate the federal constitution since they merely seek to achieve greater equality, over the ten year period, in those instances where the maintenance of county units has caused some disparities. (See Appendix G for an analysis of this so-called floating fraction by Dr. Howard D. Hamilton, Chairman, Department of Political Science, Bowling Green State University. As the tables in Appendix G show, the disparities in the various sessions of the decennium, which in themselves do not frustrate majority rule and are within constitutional limits, are over the decennium balanced out to almost mathematical exactness.)

Article XI of the Ohio Constitution Expresses the Basic Apportionment Policy of the State of Ohio and Can and Should Be Followed

Article XI, as adopted in 1851, set out a precise mathematical formula for determining representation, based solely on population. Article XI, as it presently exists is set out in full in Appendix B and, insofar as the formula for representation is concerned, is exactly the same as when adopted in 1851 except for the last sentence proviso, the Hanna Amendment, in Section 2.

It provides that in 1851 and, every ten years thereafter, following the federal census, the entire population of the state shall be divided by 100, in the case of the house, and by 35 in the case of the senate. The resulting figures are

known as the ratios of representation. Very generally, counties are entitled to as many representatives and senators as they have multiples of the ratios, and counties having less than a ratio are attached for representation purposes to the county adjoining it having the least number of inhabitants. Article XI itself created the senate districts; those counties with insufficient population for separate house representation were joined by a special schedule. Only complete counties were joined together to form districts, and from that time till the present (except in the case of the House where the Hanna Amendment made the districting provision inapplicable though its language remains unchanged in Article XI) whole counties have been joined to or separated from those original districts, according to the directions of Article XI, as their populations increased or decreased as shown by each succeeding decennial census.

Though population was the sole basis of representation, further recognition of the importance of maintaining counties as units of representation was given by providing in Section 2 that a county with a population of at least ½ ratio was entitled to separate representation in the House. The goal and the policy, however, remained the same, as explained by Ohio Supreme Court Judge Ranney in the *Dudley* case:

> "And, first, the constitution apportions political power amongst the inhabitants of the state, as nearly equally as possible, in proportion to numbers, without any regard whatever to property, or, indeed to any other circumstance. Inhabitants alone are represented: a given number in one place exercise the same political power as a like number in any other locality. I am aware that some departure from the absolute equality of numbers is allowed in favor of the inhabitants of small counties in the constitution, for the House of Representatives; but this in no wise changes the basis

> of representation from population to territory or property." *State ex rel. Dudley v. Evans*, 1 O.S. 422, 442 (1853):

The above language would not have been out of place in the opinion in *Reynolds* as a recognition of the only proper basis for legislative apportionment. The court's reference to:

> ". . . departure from the absolute equality of numbers . . ."

in recognition of county units, is strikingly similar to this Court's statement in *Reynolds*, 377 U.S. at 580, that:

> "A consideration that appears to be of more substance in justifying some deviations from population based representation in state legislatures is that of insuring some voice to political subdivisions, as political subdivisions."

It is clear that Article XI insures some voice to political subdivisions. It insures a voice to the counties to the extent permissible within the limits of the half-ratio.

The effect of the "one-half" ratio is evident. For example, the Governmental Research Institution made a reapportionment study for the Cleveland Citizens League, published in Cleveland in January 1963. The Institute's apportionment with the Hanna Amendment deleted, but with the ½ ratio retained, produces a House in which 51.6% of the population would be represented by 52.5% of the Representatives, surely as close to majority rule as any reasonable system of representation can produce.

Of course, simply by deleting the words "one half of" from Section 2, even the occasional disparities in House representation will be eliminated and Article XI will remain, in all other respects, as originally adopted and would provide virtually mathematically exact representation.

However, as the drafters of Article XI recognized, and as experience indicates, with 88 counties of varying sizes, some flexibility is desirable in order that compact, contiguous districts can more easily be formed out of those counties having insufficient population for separate representation. Accordingly, the basic goals articulated in the 1851 constitution, and all federal constitutional requirements can easily be met by changing the ½ ratio provision to, for example, an 85% provision. (Appendix G, page 42a, 44a)

It cannot be overemphasized that, in addition to assuring equal representation, the overriding objective of Article XI was to prevent gerrymandering by maintaining county lines and providing for multiple representative districts. For example, Delegate Charles Reemelin of Cincinnati, reviewed the sorry state of apportionment prior to 1851:

> "Apportionments have been arranged by a very few men, perhaps very often by a single chairman of a committee, sitting in his room at a hotel, taking a map in his hand, not asking himself, what will be for the good of the people?—what apportionment will give the best chance for a fair representation? He asks himself no such question, but goes to marking upon the map his black lines, and red and blue lines, to see how by an apportionment some particular party, or some favorite object can be best subserved and sustained. And when the report would come in here all kinds of party feeling would be excited; and it would be obvious to everyone, that, not the interests of the people, but the interest of men—of private and particular individuals and parties only were at stake.
>
> "I believe that the history of nearly every apportionment in the state will bear me out in the statements of fact, that unfair apportionments more than everything else, have been the fruitful cause of the political ill-feeling, excitement and enmity, which should never be encouraged in the State of Ohio." *Constitutional Convention proceedings, 1851, Volume 1, Page 100.*

Delegate Dorsey, a member of the committee on Apportionment, in explaining the convention's choice of a mixed single representative-multiple representative system said:

> "It is proper for me to state a large number of the committee on apportionment, were strongly in favor of the single district system, and the subject was commended to the favorable vote of the committee by the opinions of the members of the convention. But I have been induced to believe, while the plan that we have reported approximates in a very considerable degree such system, it obviates the objections that would arise, were the principle of single districts fully carried out.
>
> "Gentlemen may say what they please about the facility with which counties and cities may be divided, but I say, that when they attempt it, they will find that it is a difficult matter. In order that it may be done, there must be power somewhere, and whatever that power may be, it will be subject to political influence; and our intention has been, so far as possible, to get rid of such influences." *Constitutional Convention Proceedings, 1851, Volume 2, Page 758.*

Judge Ranney, then Delegate Ranney, also addressed himself to the question of single member districts:

> "Now I never heard that there was any demand for this cutting up of territory; and if there is one sentiment in the State that is universal in one party and nearly so in the other, it is against this cutting up of counties. It was once tried in the General Assembly, and the result was a commotion and nearly a revolution; and so great was the political indignation upon the subject, that the legislature was forced to retrace its steps." *Constitutional Convention Proceedings, 1851, Volume 2, Page 784.*

On several occasions since 1851, the people of Ohio have rejected a single member district system. Such a proposal was placed before the people in 1857 and was defeated. *The Constitutions of Ohio, Amendments and Proposed Amendments,* Issac F. Franklin.

The Constitutional Convention of 1874 again debated single member versus multiple member systems and voted to retain the 1851 system. *Proceedings and Debates, Third Constitutional Convention of Ohio*, 1874, Volume 2.

The single member issue appeared on the ballots of 1889 and 1893 as proposed constitutional amendments and was defeated each time. *The Constitutions of Ohio, Amendments and Proposed Amendments*, Issac F. Franklin.

In the Constitutional Convention of 1912 a single member plan was offered as a substitute for Section 3 (fractional representation) of Article XI. This proposal was tabled by a vote of 57-35. *Proceedings and Debates of the Constitutional Convention of the State of Ohio*, 1912, Volume 2, Page 1683.

Finally, in May 1965 a proposed constitutional amendment which would have destroyed the integrity of county lines in apportionment and which would have created subdistricts in the larger counties, was overwhelmingly rejected by the voters. This proposal was initiated by the Ohio Legislature pursuant to an order of the trial court in this case and its defeat is only the most recent manifestation of Ohio's policy of equal representation based on a gerrymander-proof system.

What the people of Ohio have so many times rejected, the trial court has now attempted to impose on them while at the same time destroying a carefully devised, time-tested system that can, consistent in every way with basic state policy, be adjusted to meet the most stringent federal constitutional standards.

By effecting basic changes in the Ohio Constitution, not necessary to achieve the requisite degree of mathematical exactness, the trial court has in effect amended the Ohio Constitution in flagrant disregard of the requirements of the Ohio Constitution that it can be amended only by a

vote of the people after: (1) a proposal by a 3/5 majority of each house, Ohio Constitution, Article XVI, Section 1 or (2) a constitutional convention, Article XVI, Section 2, or (3) initiative petition, Ohio Constitution, Article II.

Every court which has ever considered the question recognizes the fundamental concept that changes in a state constitution can be made only in accordance with constitutional methods.

For example, the Ohio Supreme Court has said:

> "The courts can have no more sacred duty, when the making or altering of the organic law is involved, than to insist upon an adherence to the procedure which the people themselves have ordained." *State ex rel. Greenlund v. Fulton*, 99 O.S. 168.

The Ohio Supreme Court has made it clear that the provisions for amendment of the Ohio Constitution will be closely and scrupulously followed. In *Leach v. Brown*, 167 O.S. 1 (1957) the Ohio Supreme Court said:

> ". . . The majority of this court is of the opinion that a proposal to amend the Constitution is not an inherent legislative prerogative. The action of the General Assembly in connection therewith is the exercise of a special power granted to the General Assembly which must be strictly complied with."

Thus there can be absolutely no justification for the creation of single member districts in the larger counties. The subdistricting of the larger counties has long been a political goal of the defendants but it is a goal not relevant to the question of equal representation. Precisely the same degree of mathematical equality would result from preserving the character of the larger counties as multi-member counties.

There is no state constitutional authority and no federal constitutional requirement for the subdistricting of the larger counties and the trial court's condonation of this

exercise of illegal power illustrates the degree to which the trial court was willing to accommodate the relief ordered to the defendant's political goals, rather than to the Ohio Constitution.

The only suggestion ever made by this Court that multi-member districts might contravene federal constitutional provisions involved cases of claimed discrimination in voting rights as a result of the multi-member districts, *Fortsen v. Dorsey*, 379 U.S. 433; *Wright v. Rockefeller*, 376 U.S. 52. In neither case did this court hold multi-member districts to be unconstitutional.

In *Stout v. Bottorff*, USDC Indiana, Case No. IP61c236 (September 20, 1965), the court said:

> "We have been shown no evidence in these records of any discrimination, purposeful or otherwise, against any group of voters in the at-large election system in Marion County and in the absence of such a showing, Grills is not entitled to any relief on the basis of this claim." *To the same effect see Davis v. Mann*, 245 F. Supp. 241, USDC Va.

In the instant case not only was there no showing of discrimination, there was not even any allegation of discrimination. The trial court has not even attempted to justify its completely unfounded decision that multi-member districts violate the federal constitution.

Nor, for that matter, has the court told anyone how a provision guaranteeing that a term of office shall not be affected by a subsequent apportionment is unconstitutional, or how a requirement of preserving county lines is unconstitutional, or indeed the respect in which any provision of Article XI, except the Hanna Amendment and the ½ ratio violates the federal constitution.

Since October 1965, after the court had apparently determined to delegate its judicial function to the defendants,

the court has issued a bewildering barrage of orders, many inconsistent with each other and with previous orders of the court. The court has even issued an order in the *Blosser* case long after that case had been consolidated with this case. That belated action was in the form of a nunc pro tunc order of November 22, 1965, Appendix D, and was previously done at the request of the defendants in an attempt to reconcile some of the many inconsistencies of the trial court's previous orders. The basic fact remains unchanged, however, no matter how many orders the court issues. That unalterable and crucial fact is that the court made no inquiry to determine whether the relief could be accommodated to the Ohio Constitution.

The trial court itself has admitted that it did not even make the attempt. In its October 27, 1965 order it states:

> "Having thus summarily refrained from considering the other carefully prepared suggested plans which have been submitted, a word concerning them should be said." Appendix A, page 7a.

It is submitted that this statement alone is enough to require reversal of the trial court's order since it conclusively establishes that the court made no attempt to accommodate the relief to the Ohio Constitution. The plan submitted by the appellant was, in fact, the existing provisions of Article XI minus only the twelve words consisting of the Hanna Amendment and the ½ ratio.

At the very least the trial court had a duty to ascertain whether relief could be accommodated to the Ohio Constitution. By the court's own admission, it did not even make the inquiry. Had it done so, it would have found that the same degree of mathematical exactness could be achieved by following rather than ignoring the Ohio Constitution.

The Hanna Amendment and the ½ Ratio Provision Are Clearly Severable from the Balance of Article XI

With reference to the Hanna Amendment, this is a self evident proposition since it was not part of the original Article XI and what can be separately added surely can be separately severed. With regard to the ½ ratio provision it clearly can be severed or increased to a larger ratio without violating in any way the basic intent of the framers of Article XI or the goals and substance of Ohio apportionment policy.

Article XI, as amended, would clearly meet the test adopted by this court in *Watson v. Buck,* 313 U.S. 387:

> "The test to determine workability after severance and whether the remainder of the act should be upheld rests on the facts of whether or not the invalid portion is of such import that the valid part would be incomplete or would cause results not contemplated by the Legislature."

And of course, consistent with this court's instruction to accommodate relief to existing state constitutional provisions, other federal district courts in apportionment cases have experienced no difficulty in finding invalid portions of state constitutions to be severable. For example, the Oklahoma district court said:

> ". . . we will not strike down the amendment in toto, because one article contravenes federal guarantees, nor an article because a section is void, nor a section because a clause is bad." *Reynolds v. State Election Board,* 233 F. Supp. 323 (Oklahoma 1964)

The district court for the Middle District of Alabama correctly construed its mandate as requiring it to apply state constitutional provisions where possible. *Sims v. Baggett,* M.D. Ala. N.D. Civil Number 1744-N, (October 2, 1965).

We quote extensively from that opinion since so much of the language is applicable to the Ohio situation:

> "The state constitution construed in the light of its application throughout the state's history would require that representation in each house be divided according to county lines and that no county should be subdivided.
>
> ". . . It is apparent that the framers of the constitution had at least two purposes in mind: First, to prevent gerrymandering, and second, to insure compact geographic districts with the legislators attuned to local problems. . . .
>
> ". . . applying the logic of these principles to the instant facts requires that the protective effect of the concluding proviso of Section 199 should be stayed only where the Federal Constitution requires. Enforcement of the concluding proviso of Section 199 to the extent that it will not conflict with the Federal Constitution in no way violates the intent with which it (that proviso) was promulgated, nor does it cause a result not contemplated by the framers of the Alabama Constitution. In fact, the limited application of Section 199 continues to effectuate its purpose."

Other district courts in apportionment cases which have recognized that state constitutional provisions are not to be treated so cavalierly are the courts for the Southern District of New York and the Minnesota District Court. The former held provisions in the New York state constitution limited in their application only to the extent that they are in unavoidable conflict with the previous decisions of this Court. *WMCA Inc. v. Lomenzo*, 238 F. Supp. 916 (D. N.Y. February 1965).

The Minnesota District Court quotes and observes the Reynolds rule of accommodating relief to state constitutions. *Honsey v. Donovan*, 236 F. Supp. 8 (D. Minn. December 4, 1964).

No such effort to accommodate the relief in the instant case was made by the trial court. Had it done so an apportionment meeting both federal constitutional requirements and state constitutional provisions, state goals, and state policies would have resulted.

The Trial Court Has Arbitrarily and Unnecessarily Destroyed the Apportionment Provisions of the Ohio Constitution

An examination of the trial court's opinion (Appendix A) will show how completely it has failed to follow the court's mandate on remand. Before considering that opinion a history of this litigation since remand on June 22, 1964 will illustrate the degree to which the trial court has failed to comprehend the nature of the problem.

On June 29, 1964, one week following remand, the appellant filed a motion requesting an immediate oral hearing so that the indicated relief (deletion of the Hanna Amendment, and modification of the ½ ratio) could be effected in time for the election of November 1964. The trial court failed to hold such a hearing until October 15, 1964, thus making it necessary to elect a new Ohio Legislature with the unconstitutional Hanna Amendment.

On the same day of the hearing, that is October 15, 1964, the Court ordered that:

> "... The apportionment system in Article XI of the Ohio Constitution governing membership to the Ohio general assembly, insofar as it pertains to the Ohio House of Representatives, violates the constitutional standard for apportionment of state legislative bodies required by the equal protection clause of the 14th amendment ...."

No mention was made of the Senate apportionment, which had not been challenged, and the court did not alter its previous findings of June 12, 1963 that:

"The apportionment of the Ohio Senate is based as nearly as practicable upon population" and
"It is clear that the Senate is properly apportioned according to population." *Nolan v. Rhodes,* 218 F. Supp. 953, ...

The court at that time obviously construed the mandate of this Court as not requiring any action in regard to the Ohio Senate, and in this respect, at least, the trial court was completely correct.

The court in its October 1964 order directed the Ohio General Assembly to effect an apportionment plan and ordered the defendants to report to the court not later than February 15, 1965, the action taken by the Ohio General Assembly. The action taken was in the form of Joint Resolution No. 1 adopted in December to appear on the primary ballot in May 1965 as Issue No. 3. That proposal involved only the Ohio House and the court's implicit approval of the General Assembly action confirmed again its previous finding with regard to the Senate.

Following the defeat of Issue No. 3 in the May 1965 primary, Clarence Blosser, who later became the plaintiff in Case No. 7585, now consolidated with this case, filed a motion to intervene as a party defendant in this case, claiming unconstitutionality of the Ohio Senate, which virtually everyone in Ohio, including the defendants and the trial court, had always recognized to be properly apportioned according to population. The appellant herein opposed the motion to intervene on the ground that a determination had already been made of the constitutionality of the Senate, and on July 13, 1965 the trial court denied the motion to intervene on the ground that:

"... the petition (position) sought to be taken by intervention is inconsistent with the mandate of the Supreme Court."

Thus, for the fourth time the trial court seemed to be publicly representing to the people of Ohio that the Senate was properly apportioned within federal constitutional limitations and yet, when a separate action was commended by the same Clarence Blosser on July 23, 1965, setting forth the identical claim that had been rejected in his motion to intervene, the trial court suddenly did an about face, Appendix C. The only reasonable inference to be drawn from the calendar of events following the commencement of the Blosser action on July 23, 1965 is that it was an action encouraged, if not instituted by the defendants and their counsel, the attorney general of Ohio, in furtherance of private political objectives.

For the first three years of this litigation the defendants had vigorously insisted that both the House and Senate were properly apportioned. Finally, recognizing that the malapportionment of the House was doomed, the defendants saw an opportunity to seize the power of apportionment which the people of Ohio thought they had forever removed from the hands of politicians in 1851. The power grab, however, required demolition of Article XI and not merely the minor adjustments that the circumstances and the law indicated. Thus followed the friendly litigation in which the attorney general of Ohio, as counsel for the defendants, cooperated willingly with plaintiff Blosser in attacking the constitutionality of the Senate and in which both received the complaisant cooperation of the trial court. The appellant was not a party to that litigation and was given no notice of its proceedings.

Acting with an alacrity which had been noticeably absent from its proceedings in the reapportionment litigation prior to that time, the trial court held a so-called hearing on the merits in the Blosser case on October 1, 1965, which was in no sense an adversary proceeding, and in which

no party undertook to defend the Ohio Constitutional provisions. A motion to intervene made by the majority and minority leaders of the Ohio Senate was denied by the court and on October 18 it issued its order declaring the Ohio Senate to be unconstitutionally apportioned, Appendix C. Meanwhile, the people of Ohio were publicly informed by the defendants, and their counsel, the attorney general of Ohio, that they had already purported to make the judicial determination of unconstitutionality of the Senate at the time they appeared before the Court by their counsel, on October 1, and pretended to defend the Ohio Constitution. (See Appendix F, the preface to a purported official publication of the State of Ohio which appeared in Newspapers in Cleveland, Columbus, and Cincinnati on October 15, 1965.)

The court permitted itself to be used in this charade and on October 27, 1965 entered its order adopting as a temporary plan of apportionment a scheme which flies in the face of virtually every Ohio policy in regard to apportionment, as articulated by the people of Ohio over 100 years and which is not based on any provision of the Ohio Constitution. Nor can this scheme even claim the virtue of a greater degree of mathematical exactness than would have been obtained by following rather than defying the Ohio Constitution. As Appendix E shows, virtually the same degree of mathematical exactness would be obtained in both the House and the Senate for the 107th General Assembly, the only one affected by the trial court's temporary plan, and this would be accomplished with no change whatsoever in the Ohio constitutional provisions affecting the Senate, and with only the deletion of the Hanna Amendment and the ½ ratio provision of Section 2 of Article XI insofar as the House is concerned.

The trial court, in its order of October 27, invests the defendants with some non-existent authority and states that:

> "It is axiomatic that any action taken by a properly constituted governmental agency is entitled to a presumption of validity, and accordingly the action of the Apportionment Board is here to be presumed to be legal, valid and constitutionally taken." Appendix A, page 5a.

From this false premise the court proceeds to say:

> "Until or unless the presumption of validity hereinabove referred to is dissipated by determination by the Ohio courts, the presumption is deemed binding upon this court." Appendix A, page 5a.

The court's reasoning here is incomprehensible and its leap to the above conclusion is indefensible. The defendants bear no relation to a "properly constituted governmental agency." They are nothing of the sort. They are simply the state officials named in Section 11, Article XI, to apply the mathematical formula of Article XI.

The defendants are not even constituted as a Board by any constitutional provision or statute of the State of Ohio, which the trial court itself recognizes in its opinion of October 27. Appendix A, page 4a.

It must first be noted that this is a rebuttable presumption. One cannot very well offer evidence to rebut a presumption when there is no hearing, and in spite of appellant's timely request of August 17, 1965 for a hearing on remedies, no such hearing was held. It cannot be that apportionment cases are so unique that decisions are based on presumptions of validity while parties are conveniently precluded from presenting evidence even to rebut a presumption.

The very case cited by the court, *Goldberg v. Truck Drivers Local Union No. 299*, 293 F.2nd 806 (6th Cir. 1961) makes it clear that this is a rebuttable presumption, for it talks in terms of "in the absence of proof to the contrary,..."

Actually, the State officials had previously represented to the Court that they had no such authority.

In the memorandum filed by the Attorney General, on behalf of the State officials, on September 18, 1964, at page 12, the Attorney General states:

> "The apportionment board has no power to convene itself and act to set up a system of apportionment. *State, ex rel. Herbert v. Bricker*, 139 O. S. 499, 41 N.E. 2d 377 (1942). The Herbert case makes it patently clear the duties of the board are strictly ministerial and automatic. Once the board has met and followed Article XI of the Constitution of Ohio, it has no authority to reconvene and further act. The board is empowered to meet once every decennial period to carry out its mechanical arithmetic duties. If the board follows the Ohio Constitution, as it here did, it may not meet again until after a decennial census is taken."

On the basis of the above admission by the Attorney General, which admission is binding on the State officials, it cannot be seen how the Court could find any presumption of validity of action by the State officials.

Courts have used this presumption in favor of the validity of administrative action where there has been a full hearing. *St. Joseph Stockyards Co. v. U.S.*, 298 U.S. 38; *Pacific Box and Basket Co. v. White*, 296 U.S. 76. Clearly in the instant case there was no hearing whatsover. Some courts have limited the presumption to tribunals acting in a judicial or quasi-judicial capacity in which they may fairly be supposed to preserve a judicial attitude. *Bloch v.*

Glander, 151 O. S. 381; *Public Service Gas Co. v. Public Utility Comm.,* 94 A 634 (N.J.). There is no question but that the apportionment board was not a judicial or quasi-judicial organ of the state. Further, when the question is as to the jurisdiction to act, there is no presumption in favor of their determination that they have jurisdiction to act. *Trigg v. Ind. Comm.,* 5 N.E. 2nd 394 (Ill.) 3; *Cook v. Massey,* 220 P. 1088.

At the most there is only a rebuttable presumption that public officials have properly performed their duties in situations where regulations, decisions, or orders of an administrative officer or agency acting within the limits of its jurisdiction are challenged. *Hynes v. Grimes Packing Co.,* 337 U.S. 86; *Interstate C. C. v. Jersey City,* 322 U.S. 503.

In its opinion in the Blosser case the court makes the following statement:

> "Apportionment in Ohio is governed entirely by the Constitution (Article XI), while an Apportionment Board has been provided, its duties are largely ministerial, namely, to effect an apportionment every decennium *based upon and in accordance with specific constitutional provisions.*" (Emphasis added) Appendix C, page 21a.

The trial court, by its declaration of invalidity of the provisions governing the apportionment of both the house and the senate, Appendix C, makes it impossible for the defendants to effect an apportionment

> "... based upon and in accordance with specific constitutional provisions."

Whence then, comes this strange discretionary power of the defendants, which the trial court graces with "a presumption of validity?"

The answer, of course, is that there is no such presumption and defendants stand in exactly the same position as

the appellant in regard to any plan of apportionment submitted to the court, pursuant to its order. If there is any presumption, it is a presumption of validity of the Ohio Constitution.

The court's entire opinion is inconsistent. It states:

> "We regard the apportionment of the General Assembly of Ohio as being a legislative rather than a judicial function."

Fair enough, but the Governor, the Auditor and the Secretary of State of Ohio do not constitute a legislature and the trial court, by abdicating its judicial responsibility, has permitted three highly partisan politicians to ignore the constitutional safeguards which the people of Ohio have insisted upon for over 100 years. At no time did the trial court defer to the Ohio legislature for the adoption of a Senate apportionment plan as it had done for the House.

The trial court can not avoid its responsibility by converting the issue, as it has tried to do, into a question of the power of the defendants, acting as the so-called apportionment board. Once the court has declared Article XI to be unconstitutional, the defendants have only that power which the court has given them. The court can not then turn to the state courts and say:

> "Tell us what we have done."

The reference in the trial court's opinion to pending state court litigation is the case of *Frank King v. James Rhodes, et al.*, 10th District Ohio Court of Appeals (Franklin County, Case No. 8228 filed October 18, 1965.). That case challenged the apportionment board's action in purporting to adopt an apportionment plan while under an order from the federal court to submit a proposed plan. The board had proceeded to take action, designated by them as official to put its own plan into effect before the federal court had

rendered a decision on the plan. The state court action was to halt the board's illegal action and does not involve the action taken by the trial court.

The root of the problem is that the trial court, almost five years after the commencement of this action still refuses to face up to its responsibilities. The Ohio situation was unique in the apportionment field since complete relief could have been granted simply by the exercise of the traditional judicial function of invalidating a severable provision of a state constitution so that the state constitution, in substance, purpose, and intent unchanged, would meet federal constitutional requirements.

In *Guinn v. United States,* 238 U.S. 347, 366 the Court makes it clear on a severability question that the federal court has a duty to make a determination.

Instead, the trial court turned to the legislature, which produced an apportionment proposal (Issue No. 3), so distasteful to the people of Ohio that it was overwhelmingly defeated in May 1965. Still the trial court failed to act and deferred again to the legislature, which, predictably, failed to procure a new apportionment proposal.

Finally, when it became apparent that no such action would be forthcoming from the legislature, the trial court appears to have abandoned its role as a judicial forum and from that time on has permitted itself to be used only as a means of attempting to legitimatize illegal and unconstitutional action by the defendants.

It is important to recall at this point that on July 13, 1965, the trial court denied a Motion to Intervene, presumably, on the ground that, as it had previously found:

> "The apportionment of the Ohio Senate is based as nearly as practicable upon population." Order of June 12, 1963, *Nolan v. Rhodes,* 218 F. Supp. 953.

Between that date, and September 16, 1965, nothing occurred of record in this case that involved the Ohio Senate in any way and yet, on September 16 the trial court ordered the parties to file on or before October 15, 1965 a suggested plan not only for the reapportionment of the Ohio House of Representatives but for the reapportionment of the Ohio Senate as well.

In *Nolan v. Rhodes,* no party had raised a question concerning the constitutionality of the Senate, and it is difficult to avoid the inference that as of September 16 the court had already determined to abdicate its function in favor of the defendants, who, as they later publicly announced had been making their own judicial determinations concerning the Ohio Legislature prior to that date, unknown to the people of Ohio until October 15, 1965.

Having thus delegated any further judicial determination to the defendants, it is not surprising that the appellant's request for a hearing for consideration of the remedy to be granted for the house malapportionment, filed on August 26, 1965, was ignored by the trial court.

Not surprising was the trial court's speedy disposition of the *Blosser* case, finding, after a mock hearing on October 1, 1965, at which there were no adversary parties, that the Senate was likewise malapportioned, Appendix C.

Not surprising was the absolute failure of the trial court to consider, or even to read, appellant's suggested remedy for the malapportionment, submitted in accordance with the court's September 16 order.

Not surprising was the court's failure to consider any of the other suggested plans submitted by various Ohio citizens and organizations. See Order of October 27, 1965, Appendix A.

In thus abdicating its judicial function the trial court has permitted itself to be a pawn in a political power play that

makes a shambles of the Ohio Constitution and of Ohio's traditional policy in regard to legislative apportionment.

If it were necessary to make that sacrifice in order to insure Ohioans of equal representation, then the appellant would not be here because it was, after all, fair and equal representation that he sought when he commenced this action on April 5, 1961. But it was his contention then, and it is his contention now that equal representation within federal constitutional limits can and should be restored to Ohio within the existing framework of the Ohio Constitution simply by deleting a few severable words.

Nothing that has occurred in the intervening five years has weakened the soundness of that position. Appendix E shows beyond any doubt that the plan which has been promulgated by the defendants and accepted by the court, at the expense of the Ohio Constitution, has virtually the same degree of mathematical precision as a proposed apportionment which complies in every respect with the Ohio Constitution and deletes only the Hanna Amendment and the ½ ratio provision.

The defects of the so-called temporary plan for the 107th General Assembly are not corrected by the label temporary. Apportionment has always been constitutional in Ohio and unless the trial court's order is reversed Ohio will have an apportionment which is not based on any constitutional provision whatsoever.

Having stripped the Ohio Constitution of its apportionment provisions, unless new constitutional provisions are adopted by the people of Ohio (an extremely unlikely event in view of the difficulty of affecting constitutional change in Ohio and in view of Ohio's recent experience in attempting to do so) the apportionment function will, for the indefinite future, rest in the hands of these three politicians with no constitutional guidelines to limit their discretion

and for just that long will the judiciary be forced to continue its involvement in legislative apportionment.

Thus, though the plan is called temporary, destruction of Article XI is permanent as is the damage to the State of Ohio and the federal- state relationship.

The Court Should Not Have Ordered Reapportionment of the Ohio Senate

The apportionment of the Ohio Senate in 1967, under the present Ohio Constitution would have provided for 45.9% of the people electing a majority of the Senate and a maximum population variance of 1.8 to 1.

This is certainly, at least, "arguably apportioned on a population basis," *Lucas v. Colorado Gen. Assembly,* 377 U.S. at 730. The percentage required to elect a majority in Lucas was 45.1 and the maximum population variance was 1.7 to 1.

Thus, the Ohio Senate, for the 1967 session (the only one affected by the trial court's order) is clearly within constitutional limits and there was no necessity for the trial court to adopt a completely new system, as a pseudo temporary plan.

As for the balance of the decennium, as pointed out on page 42a *et seq.*, Appendix G, the equalization feature of Section 6a achieves a high degree of mathematical exactness. If, however, it was the trial court's opinion that the senate disparities were too great in any particular session it should have deferred to the legislature for the consideration of a senate plan.

Considering that the trial court did not defer to the legislature to work out a plan for the Senate, nor even intimate that there was need to work out a plan, if there is going to be a change in the Senate, it should only be after the legislature has a change to consider this problem.

The trial court, while insisting that apportionment is a legislative matter, has not followed this guideline.

Certainly, the Supreme Court stated in *Reynolds*, 377 U.S. 586, that:

> "... judicial relief becomes appropriate only when a legislature fails to reapportion according to federal constitutional requisites in a timely fashion after having had an adequate opportunity to do so."

In the instant case there was no opportunity.

We repeat, if all the court was going to do was create a temporary plan, then where the state constitution already provided a fairly-apportioned senate, at the very least for the 1967 session, there was no reason to cut senatorial terms and destroy an existing Senate. It would have been judicious instead to give the legislature a chance to apportion the Senate and to decree that those senators elected next year would only have a two year term, if there were to be a change at a later date.

In any case, it is submitted that the existing senate system meets federal requirements. Over the ten year period 48.3% of the people would elect a majority of the senate and the maximum population variance would be 1.3 to 1. Appendix G, pages 43a-44a.

This averaging out is accomplished by a fractional system of representation created by the 1851 constitutional convention. This system gives recognition to population over the amount necessary for a representative ratio. Under this system, for 1967, 45.9% of the people elect a majority of the senate. Throughout the entire decennium, the minimum percentage of population electing a majority varies per session. See Appendix G, page 43a.

This system is as reasonable and logical as a system which locks in at the beginning of a decennium and does not change.

As the court stated in *Reynolds v. Sims*, 377 U.S. at 540:

> "While we do not intend to indicate that decennial reapportionment is a constitutional requisite, compliance with such an approach would clearly meet the minimal requirements for maintaining a reasonably correct scheme of legislative representation."

The fractional system actually makes for greater mathematical equality than the above guideline contemplates. Under this system, as to deviation from the senatorial ratio, in the districts with the "fractional" the maximum deviation is 11.35%, in the districts without the "fractional," the maximum deviation is 15.81% for the decennium.

Clearly for the 1967 session, the mathematical equality of the Senate apportionment is in compliance with the Federal Constitution.

Thus in the Ohio Senate, over a ten year period, there are only 14 seats out of a total of 170 that exceed a 1.9 to 1 ratio.

As Dr. Howard D. Hamilton, Chairman, Department of Political Science, Bowling Green State University explains it this "floating fraction system is, and has been since 1851, Ohio's technique for equalizing representation." Under this system it is unnecessary to divide the counties to equalize representation. Appendix G, page 33a.

There are clear advantages, as Dr. Hamilton points out, to not dividing counties. The biggest advantage is that it narrows the possibilities for gerrymandering.

In any event, it is not the floating fraction system which causes the disparities in particular sessions of the senate about which the trial court complained. Those disparities result from the fact that Section 7 of Article XI created original Senate Districts in 1851 which the Supreme Court of Ohio in *State ex rel. Herbert v. Bricker*, 139 O.S. 499, 41 N.E. 2nd 377 (1942) held could not be realigned but only

added to or subtracted from in accordance with the formula of Article XI.

It is that decision, and not Article XI which is inconsistent with the federal constitution. If that decision requires an interpretation of Article XI which leads to unconstitutional disparities, clearly Article XI can and should be interpreted so as to meet federal requirements.

If the maintenance of the original districts creates excessive disparities, the remedy lies in severing Section 7 from Article XI, not in demolishing Article XI. The intent, goal, spirit and policy of the Ohio Constitution can be carried out in full without regard to Section 7 by the creation of new districts and the application of the formula in the same manner. The system remains the same, one of the best systems in the country.

The Citizens League of Cleveland, in its publication *Greater Cleveland,* Volume XLI, No. 9, November 1965, had the following comment about the gerrymandering aspect of the trial court's action:

> "The most important shortcoming does not relate so much to this particular plan that will be used in 1966; the really bad feature is that *it has negated one of the best systems in the country for getting reapportionment every ten years, with a minimum of gerrymandering.*" (Emphasis added.)

CONCLUSION

When it is absolutely not necessary to do so in order to provide equal representation within federal limits, the trial court's order, unless reversed, will:

1. Permit the crossing of county lines in violation of Article XI of the Ohio Constitution.

2. Violate the last sentence of Section 1 of Article XI which reads:

> "No apportionment herein provided for shall affect the election or term of office of any member chosen before it was made."

3. Create chaos and confusion in the electoral process by being in conflict with Article II, Section 2 and Section 3 of the Ohio Constitution governing terms of office of representatives and senators and residency requirements.

4. Give virtually unlimited discretion in apportionment to three political officers contrary to the basic tradition and policy of Ohio apportionment since 1851.

5. Violate the Tenth Amendment to the Constitution of the United States by exercising powers altering Ohio's Constitution when no other federal constitutional provision requires such alteration. *Baker v. Carr*, recognized the necessity of exercising federal power to the extent necessary to cure malapportionment. It did not, however, repeal the Tenth Amendment, or suggest in any way that federal district courts could arbitrarily amend state constitutions.

6. Deny appellant due process of law by refusing to hold hearings on proposed remedies and by failing to consider or read appellant's proposed remedy, submitted to the court in response to its order.

7. Interrupt the continuity of representation by requiring incumbent legislators to run against each other, or to move to new districts with only twelve days notice.

8. Put the judiciary permanently in the reapportionment business in Ohio by creating a system of discretionary apportionments with no state constitutional guidelines.

9. Violate the mandate of this Court by having failed to determine whether it could:

> "... accommodate the relief ordered to the apportionment provisions of state constitutions insofar as is possible." *Reynolds v. Sims*, 377 U.S. 533, 584.

An apportionment, on the other hand, which follows the existing provisions of Article XI minus the 12 severable words which have created the malapportionment will permit an election for the 107th General Assembly without the chaos, confusion and violence to the Ohio electoral process which the trial court's action makes inevitable.

The court's alarm about "the possibility of chaos and of a breakdown in the entire election machinery of the state," Appendix A, is completely without foundation. Under an apportionment following Article XI, as proposed by appellant, the 1966 election will be conducted without any frantic residence changes by candidates, or frantic studying of maps, and indeed without the slightest break or alteration in Ohio's electoral process. Chaos results from abandoning the constitution, not from following it.

There is, it is submitted, more than sufficient time for a new apportionment under Article XI prior to February 1, 1966, the filing date for the May primary election. Furthermore, there is no question that the court has power to extend the filing date, in implementation of its order, if it should become necessary to do so.

Accordingly, the order of the trial court should be reversed and this case should be remanded with instructions to the trial court to forthwith order the apportionment of the Ohio Legislature in accordance with Article XI after the deletion of the Hanna Amendment and the ½ ratio provision.

Respectfully submitted,

/s/ KENNETH G. WEINBERG
/s/ STEWART R. JAFFY

CERTIFICATE OF SERVICE

The undersigned attorney for plaintiff herewith certifies that on the .... day of December, 1965, he served copies of the foregoing Jurisdictional Statement on each of the parties to this suit, by mailing a copy by U. S. Mail, postage prepaid, to their attorneys of record, William Saxbe, Attorney General of the State of Ohio, Jerome Goldman, 911 First National Bank Building, Cincinnati, Ohio, and Iddings, Jeffrey & Donnelly, Suite 1212 Third National Bank Building, Dayton, Ohio.

.....

Attorney for Plaintiff.

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APPENDIX A

IN THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF OHIO EASTERN DIVISION

Civil Action No. 6082

JAMES D. NOLAN,

Plaintiff,

vs.

JAMES A. RHODES, GOVERNOR OF OHIO, ET AL.,

Defendants.

Civil Action No. 6491

LEONARD M. SIVE, ET AL.,

Plaintiffs,

vs.

HARRY ELLIS, ET AL.,

Defendants.

Civil Action No. 7585

CLARENCE BLOSSER,

Plaintiff,

vs.

JAMES A. RHODES, ET AL.,

Defendants.

MEMORANDUM AND ORDER

[Filed October 27, 1965]

Before: WEICK, *Circuit Judge,* and WEINMAN and PECK, *District Judges.*

These three consolidated cases challenge the constitutionality of the apportionment of the General Assembly of the State of Ohio. Pursuant to mandate of the Supreme Court of the United States (378 U.S. 556, 1964) this Court by order dated October 15th, 1964, and entered in *Nolan v. Rhodes* and *Sive v. Ellis* (Nos. 6082 and 6491) declared Article XI, Section 2 of the Ohio Constitution void as being in violation of the Fourteenth Amendment to the Constitution of the United States, and ordered the Ohio General Assembly to effect an apportionment system for its membership in compliance with said constitutional provision. The effective date of said order was postponed until the further order of the Court to provide an opportunity for the General Assembly of Ohio to take action to effect such reapportionment. The General Assembly then met in special session on November 10, 1964, and on December 9, 1964, adopted a joint resolution providing for an apportionment plan of the House of Representatives only and the submission thereof to the voters at a special election in May, 1965. Such special election was held but the proposed amendment was defeated by the vote of the electors.

Apportionment of the House was again considered by the 106th General Assembly at its regular session in 1965, but the three-fifths vote of both Houses required to submit a constitutional amendment for a vote of the people could not be obtained. The General Assembly having adjourned sine die without having enacted another apportionment amendment for submission to the electors, the Court entered an order requesting each party to the actions to file on or

before October 15, 1965, a suggested plan for reapportionment of the Ohio House of Representatives and a suggested plan for the reapportionment of the Ohio Senate, and further announcing that any person or persons could within said period of time file a suggested plan upon leave of Court.

In *Blosser v. Rhodes* (No. 7585), by interlocutory order entered October 18, 1965, the Court determined that the Senate of the Ohio General Assembly was malapportioned for the reasons that the Senate has not been apportioned substantially on a population basis; that substantial equality among the districts has not been maintained; that the provisions of the Ohio Constitution governing apportionment of the Senate were contained in the Constitution of 1851 and have not since been amended except as to districts having fractions; that the Constitution of 1851 does not properly allow for the shifts in population which have occurred since its adoption; that the provision (Ohio Cons., Art. XI, Sec. 6a) providing for a varying number of Senators from the same district for different legislative sessions during a decennial period results in under-representation for some sessions and over-representation for others, but never for reasonably exact representation; that the provisions of the Ohio Constitution which require said malapportionment of the Senate as above related, are in violation of the Fourteenth Amendment to the Constitution of the United States and are therefore null and void. *Reynolds v. Sims,* 377 U.S. 533 (1964) and other cases decided on the same day.

In the order of September 16, 1965, each party to actions Nos. 6082 and 6491 was requested to file on or before October 15, 1965, a suggested plan for the reapportionment of the Ohio House of Representatives and a suggested plan for the reapportionment of the Ohio Senate, and the order further provided that any interested person or persons

might within the same period of time file such suggested plans by leave. Pursuant thereto such plans have been filed by the parties as well as by many other interested persons and organizations. Among the plans filed by the parties is one which was filed by the Governor, Auditor of State and Secretary of State of Ohio. Those state officials constitute the Apportionment Board created by Article XI, Section 11 of the Ohio Constitution* and simultaneously with such filing, said Board caused the same plan to be published in newspapers of general circulation in the State of Ohio as required by said Section of the Constitution.

In essence, that plan as filed and published divides the state of Ohio into 99 districts and provides for the election to the House of Representatives of one member from each House District so formed, and then provides for 33 Senate Districts, from each of which one senator is to be elected, and each of which is comprised of three House Districts. In determining the "ideal" population for a House District the population of the state was divided by one hundred (Ohio Cons., Art. XI, Sec. 1). Under the plan, no House District has less than 85% of such population, nor more than 115% thereof. No county was divided which fell within the 85 to 115% range, and in establishing the districts pre-existing political boundary lines (i.e., county lines, township, municipal, ward or precinct boundaries, etc.) were followed. The population figures used were of the last census, and since 1960 population figures were used 1960 boundaries were also followed, since there is no more recent official determination of such population shifts as may have occurred.

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* Actually, that section merely imposes the responsibility for action on the officials named and does not use the phrase "Apportionment Board." However, for convenience we herein follow the common practice of using the designation "Apportionment Board."

As above stated, each Senate District is composed of three contiguous House Districts. In determining the "ideal" population of such district, the 1960 population of the state was divided by 35 (Ohio Cons., Art. XI, Sec. 6). While the populations of the Senate Districts do not in every instance fall within the range of 85-115% of the quotient arrived at by dividing the population by 35, every Senate District is well within that range if a divisor of 33 (the number of Senators) is used. A variance within that range is here held not to be violative of constitutional standards.

It is the position of said state officials, as urged in the supporting brief accompanying the plan filed in this court by the Attorney General of Ohio, that they acted in accordance with the authority of said Section 11, thereby performing the mandatory duty imposed upon the Board to reapportion the Ohio General Assembly.

It is axiomatic that any action taken by a properly constituted governmental agency is entitled to a presumption of validity, and accordingly the action of the Apportionment Board is here to be presumed to be legal, valid and constitutionally taken. (See, e.g., *Goldberg v. Truck Drivers Local Union No. 299*, 293 F.2d 806 (6th Cir. 1961)). In this regard, mention is made of the fact that such constitutionality has been challenged in an action instituted in the Court of Appeals for Franklin County, Ohio, October 20th, 1965, in action No. 8228 on the docket of that court. Until or unless the presumption of validity hereinabove referred to is dissipated by determination by the Ohio courts, the presumption is deemed binding upon this Court, the question whether the Board acted in accordance with authority conferred by the Constitution of Ohio being peculiarly one of Ohio law and appropriate for resolution in the courts of that state.

We regard the apportionment of the General Assembly of Ohio as being a legislative rather than a judicial function. The Federal Court should intervene only to protect rights guaranteed by the Constitution of the United States. When a state apportionment has been declared unconstitutional the Federal Court should devise and put into effect a reapportionment plan only as a last resort when the Legislature fails or is unable to act. In devising a plan the Court acts to prevent a breakdown or disruption of essential state government services.

If the presumption of validity prevails and finds support in the Ohio courts, it must necessarily follow that by its action the Board has established a plan for the reapportionment of the General Assembly and the only determination to be made by this Court is whether or not such plan is in violation of the Constitution of the United States or any provisions thereof. A study of such plan convinces us that the apportionment made by the Board conforms as nearly as practicable according to population and follows the rules enunciated by the Supreme Court in *Reynolds*. This Court therefore finds that said plan is not violative of the Constitution of the United States.

Elections could not be held under the present apportionment since we have held the General Assembly to be malapportioned. Therefore, consideration must be given to an alternative, namely that of a determination by the Ohio courts of invalidity under the state constitution of the action of the Apportionment Board in its creation of the plan. Such an alternative presents the possibility of chaos and of a breakdown in the entire election machinery of the state in providing for the legislature to be elected in 1966. In order to prevent such an untoward result, and to insure continuity and the stabilization of such elections of the General Assembly said plan of the Apportionment Board

will by the Order which hereafter follows be approved, adopted and put into effect now on a temporary basis.

It seems proper to point out that if one of the other plans (or any combination of them, or a plan of the Court's original creation) were to be approved in the event of a declaration of invalidity of the Board plan by the Ohio courts, an entirely untenable situation would be created. It is required by the Ohio Constitution (Art. II, Sec. 3) that "senators and representatives shall have resided in their respective counties, or districts, one year next preceding their election. . . ." The election in 1966 will by law be held November 8th, and any present delay in the adoption of a plan would make it constitutionally impossible for some incumbent members of the General Assembly or aspirants thereto to stand for election without creating partisan or otherwise potentially embarrassing situations.

Having thus summarily refrained from considering the other carefully prepared suggested plans which have been submitted, a word concerning them should be said. Without exception, such plans indicate the thought and effort with which they have been prepared and appreciation is expressed to the public-minded citizens, legislators and organizations who made such submissions. As has been stated, in the event the Apportionment Board is found by the Ohio courts not to have acted within the proscription of the Ohio Constitution in the preparation of its plan, that plan is hereinafter only adopted as temporary. It is contemplated that in such circumstance during the period of such temporary operation further consideration will be given to the additional plans received. Several of such plans have been accompanied by motions to intervene, and while all such pending motions will be denied, all accompanying plans are received and deemed properly filed, and will be before the Court under the circumstances just set forth.

The plan filed herein by the defendants James A. Rhodes, Governor of Ohio, Ted W. Brown, Secretary of State of Ohio, and Roger Cloud, Auditor of State of Ohio (and which said plan was promulgated by said officials in their capacity as Apportionment Board under the provisions of Article XI, Section 11 of the Ohio Constitution) is attached hereto and made a part hereof. The facts of the three consolidated cases herein considered are found to be as hereinabove set forth and as stated in said attached plan, and this memorandum is filed as the Court's findings of fact and conclusions of law in accordance with the provisions of Rule 52, Federal Rules of Civil Procedure.

In considering the motion of Frank W. King for rehearing, it should be pointed out that he was afforded the opportunity to appear by his counsel as amicus curiae and participate in the trial on the merits of this case. He was personally present and his counsel examined the stipulation agreed upon by the parties and was unable to point out any particular in which it was incorrect or inadequate. He was given the opportunity to offer evidence but he offered none. His counsel was permitted to make the principal argument in the case supporting the constitutionality of the apportionment of the Ohio Senate. In short, he was accorded all the rights of a party in the hearing.

In accordance with the foregoing,

IT IS ORDERED:

1. That all pending motions should be and they are hereby denied, including the motions of the plaintiffs in actions Nos. 6082 and 6491;

2. That the interlocutory order heretofore entered holding the Senate of the Ohio General Assembly to be malapportioned, is hereby made final;

3. That the plan adopted by the Apportionment Board acting under the provisions of Article XI, Section 11, Ohio Constitution, is not in violation of the Constitution of the United States or any provisions thereof;

4. That said plan is hereby adopted and put into effect on the date of the entry hereof as a temporary plan and ordered by this Court to be followed for the election of the General Assembly of Ohio in the year 1966;

5. That jurisdiction of these cases is retained pending determination of the constitutionality of the action of the said Apportionment Board under the Constitution of the State of Ohio by the Ohio courts, and thereafter: To consider any application for an extension of the temporary period; to enforce this order; and to consider any other appropriate matter which may be brought to the attention of the Court.

/s/ PAUL C. WEICK,
United States Circuit Judge
/s/ CARL A. WEINMAN,
United States District Judge
/s/ JOHN W. PECK,
United States District Judge

APPENDIX B

OHIO CONSTITUTION

ARTICLE XI

Apportionment

1. Apportionment for Members of the General Assembly; Ratio of Representation in House.

The apportionment of this State for members of the General Assembly, shall be made every ten years, after the year one thousand eight hundred and fifty-one, in the following manner: The whole population of the state, as ascertained by the federal census, or in such other mode as the General Assembly may direct, shall be divided by the number "One Hundred," and the quotient shall be the ratio of representation in the House of Representatives, for ten years next succeeding such apportionment.

No apportionment herein provided for shall affect the election or term of office of any member of the General Assembly chosen before it was made. (Amended November 6, 1956.)

2. Same Subject.

Every county having a population equal to one-half of said ratio, shall be entitled to one representative; every county, containing said ratio, and three-fourths over, shall be entitled to two representatives; every county containing three times said ratio, shall be entitled to three representatives; and so on, requiring after the first two, an entire ratio for each additional representative. Provided, however, that each county shall have one representative. [As Amended November 3, 1903.]

3. Same Subject.

When any county shall have a fraction above the ratio, so large, that being multiplied by five, the result will be

equal to one or more ratios, additional Representatives shall be apportioned for such ratios, among the several sessions of the decennial period, in the following manner: if there be only one ratio a Representative shall be allotted to the fifth session of the decennial period; if there are two ratios, a Representative shall be allotted to the fourth and third sessions, respectively; if three, to the third, second, and first sessions, respectively; if four to the fourth, third, second, and first sessions, respectively.

4. Same Subject.

Any County, forming with another county or counties, a Representative district, during one decennial period, if it have acquired sufficient population at the next decennial period, shall be entitled to a separate representation, if there shall be left, in the district from which it shall have been separated, a population sufficient for a Representative; but no such change shall be made, except at the regular decennial period for the apportionment of Representatives.

5. Same Subject.

If, in fixing any subsequent ratio, a county, previously entitled to a separate representation, shall have less than the number required by the new ratio for a Representative, such county shall be attached to the county adjoining it, having the last number of inhabitants; and the representation of the district, so formed, shall be determined as herein provided.

6. Ratio for a Senator

The ratio for a Senator shall, forever hereafter, be ascertained, by dividing the whole population of the State, by the number thirty-five.

6a. Additional Senators.

When any Senatorial district shall have a fraction above the ratio, so large, that being multiplied by five the result will be equal to one or more ratios, additional Senators shall be elected for two year terms and shall be apportioned for such ratios, among the several sessions of the decennial period, in the following manner: if there be only one ratio a Senator shall be allotted to the fifth session of the decennial period; if there are two ratios, a Senator shall be allotted to the fourth and third sessions, respectively; if three, to the third, second and first sessions, respectively; if four to the fourth, third, second, and first sessions, respectively provided that no additional senator mentioned herein shall be elected if his election would result in his senatorial district having as members of the next following general assembly a number of senators in excess of its number of full ratios plus one. (Adopted November 6, 1956.)

7. Senatorial Districts.

The State is hereby divided into thirty-three Senatorial districts, as follows: the County of Hamilton shall constitute the first Senatorial district; the counties of Butler and Warren, the second; Montgomery and Preble, the third; Clermont and Brown, the fourth; Greene, Clinton and Fayette, the fifth; Ross and Highland, the sixth; Adams, Pike, Scioto and Jackson, the seventh; Lawrence, Gallia, Meigs and Vinton, the eighth; Athens, Hocking and Fairfield, the ninth; Franklin and Pickaway, the tenth; Clark, Champaign and Madison, the eleventh; Miami, Darke and Shelby, the twelfth; Logan, Union, Marion and Hardin, the thirteenth; Washington and Morgan, the fourteenth; Muskingum and Perry, the fifteenth; Delaware and Licking, the sixteenth; Knox and Morrow, the seventeenth; Coshocton and Tuscarawas, the eighteenth; Guernsey and Monroe,

the nineteenth; Belmont and Harrison, the twentieth; Carroll and Stark, the twenty-first; Jefferson and Columbiana, the twenty-second; Trumbull and Mahoning, the twenty-third; Ashtabula, Lake and Geauga, the twenty-fourth; Cuyahoga, the twenty-fifth; Portage and Summit, the twenty-sixth; Medina and Lorain, the twenty-seventh; Wayne and Holmes, the twenty-eighth; Ashland and Richland, the twenty-ninth; Huron, Erie, Sandusky and Ottawa, the thirtieth; Seneca, Crawford and Wyandot, the thirty-first; Mercer, Auglaize, Allen, Van Wert, Paulding, Defiance and Williams, the thirty-second; and Hancock, Wood, Lucas, Fulton, Henry and Putnam, the thirty-third. For the first decennial period, after the adoption of this constitution, each of said districts shall be entitled to one Senator, except the first district, which shall be entitled to three Senators.

8. Same Subject.

The same rules shall be applied, in apportioning the fractions of Senatorial districts, and in annexing districts, which may hereafter have less than three-fourths of a Senatorial ratio, as are applied to Representative districts.

9. Same Subject.

Any county forming part of a Senatorial district, having acquired a population equal to a full Senatorial ratio, shall be made a separate Senatorial district, at any regular decennial apportionment, if a full Senatorial ratio shall be left in the district from which it shall be taken.

10. Apportionment of Representatives for Ten Years.

For the first ten years, after the year one thousand eight hundred and fifty-one, the apportionment of Representatives shall be as provided in the schedule, and no change shall ever be made in the principles of representa-

tion, as herein established, or, in the Senatorial districts, except as above provided. All territory, belonging to a county at the time of any apportionment, shall, as to the right of representation and suffrage, remain an integral part thereof, during the decennial period.

11. When the Governor, Auditor and Secretary of State to Determine Ratio of Representation.

The Governor, Auditor, and Secretary of State, or any two of them, shall, at least six months prior to the October election, in the year one thousand eight hundred and sixty-one, and, at each decennial period thereafter, ascertain and determine the ratio of representation, according to the decennial census, the number of Representatives and Senators each county or district shall be entitled to elect, and for what years, within the next ensuing ten years, and the Governor shall cause the same to be published, in such manner as shall be directed by law.

Judicial Apportionment

12. Judicial Purposes.

For Judicial purposes, the State shall be apportioned as follows:

First District.

The county of Hamilton, shall constitute the first district, which shall not be subdivided; and the Judges therein, may hold separate courts, or separate sittings of the same court, at the same time.

Second District.

The counties of Butler, Preble and Darke shall constitute the first subdivision, Montgomery, Miami and Champaign, the second, and Warren, Clinton, Greene and Clark, the third subdivision, of the second district; and, together, shall form such district.

Third District.

The counties of Shelby, Auglaize, Allen, Hardin, Logan, Union and Marion, shall constitute the first subdivision, Mercer, Van Wert, Putnam, Paulding, Defiance, Williams, Henry and Fulton, the second, and Wood, Seneca, Hancock, Wyandot and Crawford, the third subdivision, of the third district; and, together, shall form such district.

Fourth District.

The counties of Lucas, Ottawa, Sandusky, Erie and Huron, shall constitute the first subdivision, Lorain, Medina and Summit, the second, and the county of Cuyahoga, the third subdivision, of the fourth district; and, together, shall form such district.

Fifth District.

The counties of Clermont, Brown and Adams, shall constitute the first subdivision, Highland, Ross and Fayette, the second, and Pickaway, Franklin and Madison, the third subdivision, of the fifth district; and, together, shall form such district.

Sixth District.

The counties of Licking, Knox and Delaware, shall constitute the first subdivision, Morrow, Richland and Ashland, the second, and Wayne, Holmes and Coshocton, the third subdivision, of the sixth district; and, together shall form such district.

Seventh District.

The counties of Fairfield, Perry and Hocking, shall constitute the first subdivision, Jackson, Vinton, Pike, Scioto and Lawrence, the second, and Gallia, Meigs, Athens and Washington, the third subdivision, of the seventh district; and, together, shall form such district.

Eighth District.

The counties of Muskingum and Morgan, shall constitute the first subdivision, Guernsey, Belmont and Monroe, the second, and Jefferson, Harrison and Tuscarawas, the third subdivision, of the eighth district; and, together, shall form such district.

Ninth District.

The counties of Stark, Carroll and Columbiana, shall constitute the first subdivision, Trumbull, Portage and Mahoning, the second, and Geauga, Lake and Ashtabula, the third subdivision, of the ninth district; and, together, shall form such district.

13. New Counties Attached.

The General Assembly shall attach any new counties, that may hereafter be erected, to such districts, or subdivisions thereof, as shall be most convenient.

APPENDIX C

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF OHIO
WESTERN DIVISION

Civil Action No. 3201

CLARENCE BLOSSER,

Plaintiff,

vs.

JAMES A. RHODES, et al.,

Defendants.

MEMORANDUM AND ORDER

[Filed October 18, 1965]

The Complaint in this action, which was filed July 23, 1965, alleges malapportionment of the Senate of the Ohio General Assembly and prays for a determination that its composition be declared unconstitutional. After the case was fully at issue, a pre-trial conference was conducted in the chambers of the Chief Judge of this District at which the plaintiff was represented by his attorney and the defendants were represented by the Attorney General of Ohio. Subsequent to that conference, and pursuant to agreements therein reached, the cause was set for hearing on the merits for October 1, 1965.

On the day before said hearing, the President Pro Tempore and the Minority Leader of the Ohio Senate, "in their official capacities and as citizens, residents, electors, and taxpayers," filed their motion to intervene as parties defendant, and on the day of the hearing, which was presided over by the Chief Judge of the Sixth Circuit Court of Ap-

peals, said Senators filed a memorandum in support of their motion.

At the hearing on the merits, counsel for the parties introduced a Stipulation of Facts (Appendix I) into evidence and rested. Counsel for the said Senators were advised that while a ruling was reserved on their motion to intervene, they would be granted equal time for oral argument and they were further asked by the presiding Judge whether they desired to present evidence in addition to the stipulation which had been received. They responded in the negative to the latter inquiry, but in fact orally argued the merits of the case without limitation. None of counsel requested an opportunity to supplement their respective oral arguments by brief.

In 1961 in actions styled *James D. Nolan v. James A. Rhodes, Governor of Ohio, et al.*, being civil action No. 6082 on the docket of the Eastern Division of this court, and *Leonard M. Sive, et al. v. Harry Ellis, et al.*, now being civil action No. 6491 on the docket of the Eastern Division of this court, the plaintiffs alleged malapportionment of the House of Representatives of the Ohio General Assembly. The *Sive* case was ordered transferred to the said Eastern Division and the two actions were consolidated for trial. Subsequently, after remand by the Supreme Court (378 U.S. 556 (1964)), an order was entered declaring Article XI, Section 2 of the Ohio Constitution void as being in violation of the Fourteenth Amendment to the Constitution of the United States, and ordering the Ohio General Assembly to effect an apportionment system for its membership in compliance with said constitutional provision. The effective date of said order was postponed until the further order of the Court to provide an opportunity for the General Assembly of Ohio to take action to effect such reapportionment. The General Assembly then met in special session

on November 10, 1964, and on December 9, 1964, adopted a joint resolution providing for an apportionment plan of the House of Representatives only and the submission thereof to the voters at a special election in May, 1965. Such special election was held but the proposed amendment was defeated by the vote of the electors.

Apportionment of the House was again considered by the 106th General Assembly at its regular session in 1965, but the three-fifths vote of both Houses required to submit a constitutional amendment for a vote of the people could not be obtained. The General Assembly having adjourned sine die without having enacted another apportionment amendment for submission to the electors, the Court entered an order requesting each party to the actions to file on or before October 15, 1965, a suggested plan for reapportionment of the Ohio House of Representatives and a suggested plan for the reapportionment of the Ohio Senate, and further announcing that any person or persons could within said period of time file a suggested plan upon leave of Court. In this regard attention is directed to the fact that while the order of October 15, 1965, limited its finding as to unconstitutional composition to the House of Representatives, the direction to the General Assembly was not so limited. The three judges assigned to hear the *Nolan* and *Sive* cases are the same three judges before whom the present case is pending. In *Nolan* and *Sive* the parties conceded that the Senate was properly apportioned.

Having fully considered the motion to intervene in the light of the supporting memorandum and oral arguments and of all of the surrounding facts and circumstances, it has been concluded that that motion should be denied.* For

* Such conclusion makes a consideration and determination of the tendered "Motion of Intervening Defendants to Dismiss the Complaint" unnecessary.

reasons which will more fully hereinafter appear and for the reason that the purported intervenors expressly advised that they desired to present no evidence and were accorded right to full oral argument, such denial in no way prejudices them.

Turning to the merits of the case, it immediately becomes apparent from the record that the present composition of the Ohio Senate cannot meet the standards established by the Supreme Court. Before discussing the aspects of the provisions which are hereinafter determined to fall below those standards, a review of the pertinent provisions of the Ohio Constitution may be helpful.

Apportionment in Ohio is governed entirely by its Constitution (Article XI). While an Apportionment Board has been provided, its duties are largely ministerial, namely, to effect an apportionment every decennium based upon and in accordance with specific constitutional provisions. The ratio for a senator shall "forever" be ascertained by dividing the whole population of the state by 35 (Art. XI, Sec. 6). The state is divided into 33 senatorial districts (Art. XI, Sec. 7). When the population of a county or district previously entitled to separate representation in the Senate, drops below three-fourths of a ratio, it is attached to the adjoining district having the least number of inhabitants, to form a new Senatorial District (Art. XI, Secs. 5 and 8).

Any county forming part of a Senatorial District which acquires a population equal to a full Senatorial District, is to be made a separate Senatorial District if a full senatorial ratio shall be left in the district from which the county is taken (Art. XI, Sec. 9). Any district having a fraction above the senatorial ratio so large that being multiplied by five the result would equal one or more ratios, is to have Senators apportioned for such ratios among the several Sessions of the decennial period in the following manner;

If there is one ratio, a Senator is alloted to the fifth session; if two, to the fourth and third sessions; if three, to the third, second and first sessions; and if four, to the fourth, third and second sessions (Art. XI, Sec. 6a, adopted Nov. 6, 1956).

The population of Ohio according to the 1960 Federal Census was 9,706,397. There are single and multiple member districts in Ohio. The average population represented per Senator, using three different divisors[1] was as follows:

1. 9,706,397 ÷ 34 — 285,481
2. 9,706,397 ÷ 35 — 277,325
3. 9,706,397 ÷ 36 — 269,622

In the 105th General Assembly the single Senatorial District containing the largest number of people had a population of 439,347, while the smallest single member district contained 218,268. Thus the largest district contained 201.29% of population as compared with the smallest. In the 106th General Assembly the largest single member district contained 192.30% of population as compared with the smallest.

In the 105th General Assembly eight Senators represent a population which is more than 15% above the average population, based on a divisor of 33, and nine Senators based on a divisor of 35. Five Senators in the 105th General Assembly represent a population which is more than 15% below the average population per Senator based on a divisor of 33, and four Senators represent a population more than 15% below the average based on a divisor of 35.

Using the divisor 32, eight Senators in the 106th General Assembly represent a population more than 15% above the average population per Senator and seven Senators rep-

[1] The advisors used represented the number of Senators in different bienniums.

resent a population which is more than 15% below the average. Based on a divisor of 35 there are ten Senators representing a population which is more than 15% above the average population per Senator, and two Senators representing a population more than 15% below the average population per Senator.

Charts are attached as Exhibits C and D to the stipulation which reveal an accurate percentage variance above or below an average population which a Senator in a single member district would represent during the 105th, 106th, 107th, 108th and 109th General Assemblies. These charts show wide variances in the various districts involving substantial under-representation and over-representation.

In the 105th General Assembly, based on a divisor of 35, one district was over-represented by 17.62% and eight districts were under-represented by variances of 15.93 to 58.42%. If the divisor of 33 is used, two districts are over-represented from 18.28 to 22.33% while seven districts were under-represented by percentages varying from 15.49 to 49.37.

In the 106th General Assembly, using a divisor of 35, one district was over-represented by 17.62% and eight districts were under-represented by percentages varying from 15.93 to 58.42. Using a divisor of 32, four districts were over-represented by 15.34 to 24.68% and six districts were under-represented by 18.49 to 44.82%. Variances equal to or greater than these, appear in the 107th, 108th and 109th General Assemblies with under-representations in the 108th and 109th totaling 64.76% if a divisor of 35 is used and 60.06% in the 109th General Assembly if a divisor of 34 is used.

Considering each Senator as representing a single member district, the percentage of population required to elect

a majority of Senators in the 105th through the 109th General Assemblies, range from 42.2 to 46%.

It appears clear to us that the Ohio Senate has not been apportioned substantially on a population basis; that substantial equality among the districts has not been maintained; that the provisions of the Ohio Constitution governing apportionment of the Senate were contained in the Constitution of 1851 and have not since been amended except as to districts having fractions; that the Constitution of 1851 does not properly allow for the shifts in population which have occurred since its adoption; that the provisions of the Ohio Constitution which require said malapportionment of the Senate as above related, are in violation of the Fourteenth Amendment to the Constitution of the United States and are therefore null and void. *Reynolds v. Sims*, 377 U.S. 533 (1964) and other cases decided on the same day.

We do not believe that so-called "average" representation over a ten year period comports with constitutional principles because a single Senator cannot be divided into fractional parts. He has only one vote, which is not weighted. He does not have fractional votes to which his district might be entitled. The vote of an individaul may be equal to only one-half or two-thirds of that of a voter in another district during some sessions and in other sessions his vote may be worth twice as much as previously.

It is patently impossible to determine the constitutionality of a bicameral legislature on the basis of a consideration of either house alone, and the Supreme Court has specifically supported that proposition. (*Maryland Committee for Fair Representation v. Tawes*, 377 U.S. 656 (1964)). Accordingly, it is here further determined that for convenience of consideration here and in such review as may hereafter be made this cause should be consolidated

with the *Nolan* and *Sive* cases. Additionally, such consolidation will make it possible for movants in the motion to intervene to file any plan they may desire to submit in accordance with the order hereinabove mentioned, or to file a motion to intervene in the consolidation action. If such intervention is effected, the time period specified in that order will be separately enlarged to give said movants full opportunity to prepare and submit such plans.

IN ACCORDANCE WITH THE FOREGOING, it is hereby ordered:

1. That the Motion to Intervene as Parties Defendant filed herein September 30, 1965, should be and it is hereby denied;

2. That the Senate of the Ohio General Assembly should be and it is hereby held to be malapportioned for the reasons and to the extent hereinabove set forth;

3. That this cause should be and it is hereby transferred to the Eastern Division of this District;

4. That this cause should be and it is hereby ordered consolidated for further proceedings incident to considerations of suggested plans relative to the reapportionment of the Ohio General Assembly with *James D. Nolan v. James A. Rhodes, Governor*, and *Leonard M. Sive v. Harry Ellis*, which said actions are civil actions Nos. 6082 and 6491, respectively, on the docket of the Western Division of this District; and

5. That this order shall be interlocutory in nature only, and that a final entry shall be entered herein subsequent to the further proceedings referred to in 4. above.

/s/ PAUL C. WEICK,
Chief Judge of the Court of Appeals
/s/ CARL A. WEINMAN,
Chief District Judge
/s/ JOHN W. PECK,
District Judge

(APPENDIX I ATTACHED ONLY TO ORIGINAL AND COPIES TO COUNSEL OF RECORD FOR PLAINTIFF AND DEFENDANTS.)

APPENDIX D

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF OHIO
EASTERN DIVISION

Civil Action No. 7585

CLARENCE BLOSSER,

Plaintiff,

vs.

JAMES A. RHODES, et al,

Defendants.

ORDER ON PLAINTIFF'S MOTION FOR SPECIFIC FINDINGS

This Court entered its memorandum and order on October 18, 1965, holding that the Senate of the General Assembly of Ohio was malapportioned. The order stated that it was interlocutory in nature. On October 27, 1965 the Court entered an order in the consolidated cases of Nolan, Sive and Blosser, making final the interlocutory order.

In order that there may be specific findings relative to the sections of Article XI of the Constitution of Ohio, which we have held to be in violation of the Constitution of the United States, it is ORDERED that the memorandum and order of October 18, 1965, be amended by adding thereto the following findings and order:

"1) To the extent that the second paragraph of section 1 requires the continuance in office after December 31, 1966, of members of the General Assembly of Ohio who were elected under an unconstitutional apportionment

plan, that paragraph is in violation of the Fourteenth Amendment of the Constitution of the United States.

2) Section 6a attempts to equalize, over a ten year period, the representation allotted to senatorial districts with population in excess of a ratio, but results in a substantial inequality of representation in each Legislature either by way of over-representation or under-representation in violation of the Fourteenth Amendment of the Constitution of the United States.

3) Section 7 requires that changes in senatorial districts be derived from a basic grouping of counties which reflected the pattern of population in Ohio in 1851. In practice this requirement prevents the formation of senatorial districts of substantially equal population in violation of the Fourteenth Amendment of the Constitution of the United States.

4) Section 8 applies the same rules in apportioning senatorial districts and in annexing districts which may hereafter have less than three-fourths of a senatorial ratio, as are applied to representative districts. Application of these rules, in our judgment, results in malapportionment of the Senate and they are therefore in violation of the Fourteenth Amendment to the Constitution of the United States.

5) Section 9 allows the reduction of the geographical size of senate districts in only one situation. In practice this limitation prevents the adjustment of district boundaries to accommodate shifts in population, and therefore results in a substantial inequality of representation, which violates the Fourteenth Amendment of the Constitution of the United States.

6) Insofar as Section 10 attempts to protect the preceding sections of Article XI, governing the apportion-

ment of the House of Representatives and the Senate from attack under the Fourteenth Amendment to the Constitution of the United States, it is in conflict with the supremacy clause of the United States Constitution, being Article VI, and is unconstitutional.

IN ACCORDANCE WITH THE FOREGOING IT IS ORDERED THAT:

1) All terms of office in both the House of Representatives and the Senate of the General Assembly of Ohio shall end on December 31, 1966, and insofar as the second paragraph of Section 1 of Article XI of the Constitution of Ohio requires the retention of office by members of the General Assembly elected under an unconstitutional apportionment plan, the requirements of that section are hereby suspended.

2) Each of the following sections of Article XI of the Constitution of Ohio violates the Fourteenth Amendment of the United States Constitution and is therefore void: Section 6a, Section 7, Section 8, and Section 9.

3) To the extent that Section 10 of Article XI of the Constitution of Ohio attempts to protect the other sections of Article XI from attack for violation of the Constitution of the United States, it is null and void as being in violation of Article VI of the Constitution of the United States."

This ORDER is entered *nunc pro tunc* as of October 18, 1965, and is made final by the order of the Court entered in the consolidated cases on October 27, 1965.

/s/ PAUL C. WEICK,
Circuit Judge
/s/ CARL A. WEINMAN,
District Judge
/s/ JOHN W. PECK,
District Judge

APPENDIX E

Statistical Comparison of Trial Court's and Appellant's Apportionment for 107th General Assembly, 1967

House

	Appellant's Apportionment	*Trial Court's Apportionment*
Minimum Percentage Needed to Elect Majority	48.0%	47.3%
Population Ratio Variance	1.7:1	1.3:1
Average Deviation	7.2%	6.4%

Senate

	Appellant's Apportionment	*Trial Court's Apportionment*
Minimum Percentage Needed to Elect Majority	45.9%	49.6%
Population Ratio Variance	1.8:1	1.3:1
Average Deviation	12.6%	3.9%

APPENDIX F

GOVERNOR'S PUBLICATION OF THE RATIO OF REPRESENTATION FOR THE OHIO SENATE AND HOUSE OF REPRESENTATIVES BASED UPON THE 1960 DECENNIAL CENSUS AS ASCERTAINED AND DETERMINED BY THE GOVERNOR, THE AUDITOR OF STATE AND THE SECRETARY OF STATE IN SEPTEMBER, 1965, TOGETHER WITH THEIR APPORTIONMENT OF SENATORS AND REPRESENTATIVES TO DISTRICTS AND THEIR DETERMINATION OF WHICH SENATORIAL DISTRICTS SHALL ELECT SENATORS TO TAKE OFFICE FOR FOUR-YEAR TERMS STARTING JANUARY 1, 1967, AND WHICH FOR FOUR-YEAR TERMS STARTING JANUARY 1, 1969.

I, James A. Rhodes, Governor, pursuant to Article II, Section 2 and Article XI, Section 11 of the Constitution of Ohio and further pursuant to Sections 107.09 and 107.13 of the Revised Code, hereby give public notice that the Governor, the Auditor of State and the Secretary of State, by actions taken September 8 and September 27, 1965, have unanimously ascertained and determined (1) that the apportionment of the Ohio House of Representatives and the Ohio Senate under which the 106th General Assembly was elected is unconstitutional in such vital respects under both the Ohio and United States Constitutions as to be a nullity; (2) that the ratio of representation for the Ohio House of Representatives according to the 1960 decennial census is one representative for each 97,064 people and that the ratio of representation for the Ohio Senate according to the same census is one Senator for each 277,326 people; (3) that each House District shall be entitled to elect one Representative in 1966, 1968 and 1970, that even-numbered Senate Districts shall be entitled to elect one Senator for a four-year term in 1966 and 1970, and that odd-numbered Senate Districts shall be entitled to elect one Senator for a two-year term in 1966 and to a four-year term in 1968 (subject to the orders of the Court hereinafter mentioned); (4) that an apportionment for the remainder of the present decennium of the Ohio House of Representatives and of the Ohio Senate that is consistent with the orders of the United States District Court for the Southern District of Ohio, Western Division in Civil Actions No. 6062 *(Nolen* vs. *Rhodes, Governor of Ohio, et al.)*, No. 6491 *(Sive, et al.* vs. *Ellis, et al.)*, and No. 3201 *(Blosser* vs. *Rhodes, Governor of Ohio, et al.)* and not contrary to other relevent Federal Court decisions, is an apportionment in which ninety-nine House Districts and thirty-three Senate Districts are distributed over Ohio uniformly on a population basis, with each district electing one Representative or one Senator as the case may be; (5) that Senators to be elected from odd-numbered districts shall take office for four-year terms starting January 1, 1967, and that Senators to be elected from even-numbered districts shall take office for two-year terms on January 1, 1967, and thereafter for four-year terms starting January 1, 1969.

The Governor, the Auditor of State and the Secretary of State, accordingly, have apportioned the Ohio House of Representatives and the Ohio Senate for the remaining years of the current decennium as hereinafter set forth.

APPORTIONMENT OF THE OHIO HOUSE OF REPRESENTATIVES

By each of said ascertainments and determinations as pertain to representation in the House of Representatives, the following House Districts are constituted, from each of which one Representative shall be elected to take office January 1, 1967, for a two-year term:

DESIGNATION	COMPRISING	1960 POPULATION
House District 1:	Williams County	20,998
	Fulton County	20,201
	Defiance County	31,508
	TOTAL	90,777
House District 2:	Paulding County	16,762
	Van Wert County	28,840
	Putnam County Township—	
	Monterey Township	1,668
	Sugar Creek Township	2,734
	Auburn Township	755
	Bucks Township	1,110
	Jefferson Township	781
	Franklin Township	2,932
	Salem Township	1,350
	Oxford Township	5,079
	York Township	966
	Dover Township	14,717
	TOTAL	85,328
House District 32:	Carroll County	20,857
	Harrison County	17,995
	Tuscarawas County Townships—	
	Clay Township	2,217
	Fairfield Township	885
	Goshen Township	19,215
	Mill Township	12,519
	Perry Township	405
	Rush Township	904
	Sandy Township	2,281
	Union Township	1,029
	Warren Township	585
	Warwick Township	2,600
	Washington Township	591
	Lawrence Township	2,045
	TOTAL	84,128
House District 33:	Jefferson County	99,201
House District 34:	Columbiana County	107,004
House District 35:	Portage County	91,798
House District 36:	Geauga County	47,878
	Lake County Townships—	
	Leroy Township	1,502
	Madison Township	9,841
	Perry Township	4,834
	Painesville Township	31,146
	Concord Township	3,860
	TOTAL	98,756
House District 37:	Lake County Townships—	
	Chagrin Township—	
	Willoughby City	15,058
	East Lake Township—	
	East Lake City	12,467
	Kirtland Township	4,576
	Lakeline Township—	
	Lakeline Village	269
	Mentor Township	37
	Timberlake Township—	
	Timberlake Village	670
	Waite Township—	
	Waite Hill Village	360
	Wickliffe Township—Wickliffe City	15,760
	Willoughby Township	4,241
	Willowick Township—	
	Willowick City	18,749
	TOTAL	97,517
House District 38:	Ashtabula County	98,067
	Cleveland City Ward 13	19,947
	Cleveland City Ward 17	23,062
	Cleveland City Ward 31	13,772
	TOTAL	97,591
House District 47:	Cuyahoga County Townships and Wards—	
	Cleveland City Ward 2	27,294
	Cleveland City Ward 6	24,205
	Cleveland City Ward 9	42,697
	Laurel Township—Brooklyn City	10,733
	Brooklyn Township—	
	Linndale Village	381
	TOTAL	105,310
House District 48:	Cuyahoga County Wards—	
	Cleveland City Ward 3	23,837
	Cleveland City Ward 5	22,274
	Cleveland City Ward 7	21,984
	Cleveland City Ward 8	25,339
	TOTAL	93,434
House District 49:	Cuyahoga County Township and Ward—	
	Lakewood Township—	
	Lakewood City	66,154
	Cleveland City Ward 1	27,948
	TOTAL	94,102
House District 50:	Cuyahoga County Townships and Wards—	
	Charleston Township—	
	Middleburgh Heights City	7,282
	Brook Park Township—	
	Brook Park City	12,856
	River Edge Township	416
	Cleveland City Ward 13	57,020
	Cleveland City Ward 4	31,152
	TOTAL	108,726
House District 51:	Cuyahoga County Townships—	
	Parma Township—Parma City	82,845
	Parma Heights Township—	
	Parma Heights City	18,100
	TOTAL	100,945
House District 52:	Cuyahoga County Townships—	
	Bay Township—Bay Village City	14,489
	Rocky River Township—	
	Rocky River City	18,097
	Fairview Township—	
	Fairview Park City	14,624
	North Olmsted Township—	
	North Olmsted City	16,290
	Goldwood Township—	
	Parkview Village	2,018
	Olmsted Township	4,773
	Olmsted Falls Township—	
	Olmsted Falls Village	2,144
	Westview Township—	
	Westview Village	7,303
	Berea Township—Berea City	16,592
	Westlake-Dover Township—	
	Westlake City	12,906
	TOTAL	109,236
House District 14:	Huron County	47,826
	Erie County Townships—	
	Portland Township—	
	Sandusky City	31,989
	Perkins Township	8,955
	Oxford Township	1,111
	Huron Township	6,358
	Milan Township	2,593
	Berlin Township	2,691
	Vermilion Township	5,439
	Florence Township	1,648
	Kelleys Island Township	171
	TOTAL	108,281
House District 15:	Seneca County	59,326
	Crawford County	46,775
	TOTAL	106,101
House District 16:	Wyandot County	21,648
	Marion County	60,221
	Union County	22,853
	TOTAL	104,722
House District 17:	Richland County Townships—	
	Plymouth Township	2,089
	Case Township	1,605
	Blooming Grove Township	922
	Butler Township	667
	Sharon Township	10,076
	Jackson Township	2,436
	Franklin Township	1,384
	Weller Township	1,227
	Sandusky Township	762
	Springfield Township	5,141
	Madison Township	73,556
	Mifflin Township	2,604
	TOTAL	102,469
House District 18:	Morrow County	15,405
	Knox County	38,808
	Delaware County	36,107
	Richland County Townships—	
	Troy Township	2,546
	Washington Township	4,963
	Monroe Township	2,138
	Perry Township	610
	Jefferson Township	2,898
	Worthington Township	2,137
	TOTAL	109,612
House District 19:	Licking County	90,342
House District 20:	Madison County	28,454
	Fayette County	24,778
	Highland County	29,716
	Adams County	19,982
	TOTAL	100,927
House District 21:	Pickaway County	35,855
	Ross County	61,215
	TOTAL	97,070
House District 22:	Pike County	19,380
	Scioto County	84,216
	TOTAL	103,596

	TOTAL	90,777
House District 2:	Paulding County	16,792
	Van Wert County	28,840
	Putnam County Township—	
	Monterey Township	1,688
	Auglaize County	36,147
	Mercer County Townships—	
	Black Creek Township	752
	Dublin Township	2,058
	Union Township	1,507
	Liberty Township	1,002
	Hopewell Township	910
	Center Township	959
	TOTAL	90,655
House District 3:	Darke County	45,612
	Preble County	32,498
	Mercer County Townships—	
	Recovery Township	1,335
	Gibson Township	1,372
	Granville Township	2,912
	Marion Township	2,554
	Washington Township	1,188
	Butler Township	4,256
	Franklin Township	1,369
	Jefferson Township	9,885
	TOTAL	103,481
House District 4:	Henry County	25,392
	Wood County	72,596
	TOTAL	97,988
House District 5:	Putnam County	
	less Monterey Township	26,643
	Hancock County	53,686
	Hardin County	29,633
	TOTAL	109,962
House District 6:	Allen County	108,691
House District 7:	Shelby County	23,566
	Miami County	72,901
	TOTAL	106,467
House District 8:	Logan County	34,908
	Champaign County	28,714
	Clark County Townships—	
	Pike Township	2,001
	German Township	3,661
	Moorefield Township	3,964
	Pleasant Township	1,568
	Bethel Township	11,363
	Mad River Township	5,158
	TOTAL	92,327
House District 9:	Clark County Townships	
	Harmony Township	2,424
	Madison Township	2,562
	Greene Township	2,346
	Springfield City	62,728
	Springfield Township	12,575
	TOTAL	102,735
House District 10:	Greene County	94,962
House District 11:	Warren County	65,711
	Clinton County	30,004
	TOTAL	95,715
House District 12:	Clermont County	80,260
	Brown County	25,176
	TOTAL	105,706
House District 13:	Ottawa County	35,228
	Sandusky County	53,498
	Erie County Townships—	
	Groton Township	899
	Margaretta Township	6,148
	TOTAL	95,854

	Ross County	61,215
	TOTAL	97,070
House District 22:	Pike County	19,380
	Scioto County	84,216
	TOTAL	103,596
House District 23:	Medina County	65,315
	Ashland County Townships—	
	Ruggles Township	649
	Troy Township	707
	Sullivan Township	968
	Clear Creek Township	1,360
	Orange Township	1,708
	Jackson Township	1,352
	Milton Township	1,633
	Montgomery Township	2,139
	Union Township—Ashland City	17,419
	Perry Township	1,156
	TOTAL	94,406
House District 24:	Wayne County	75,497
	Ashland County Townships—	
	Mifflin Township	739
	Vermillion Township	1,600
	Mohican Township	1,467
	Green Township	2,993
	Lake Township	534
	Hanover Township	2,347
	TOTAL	85,177
House District 25:	Fairfield County	63,912
	Hocking County	20,168
	Vinton County	10,274
	TOTAL	94,354
House District 26:	Jackson County	29,372
	Lawrence County	55,438
	TOTAL	84,810
House District 27:	Gallia County	26,120
	Meigs County	22,159
	Athens County	46,998
	TOTAL	95,277
House District 28:	Muskingum County	79,189
	Perry County	27,864
	Morgan County Townships—	
	York Township	919
	Deerfield Township	498
	Union Township	399
	Homer Township	557
	TOTAL	109,396
House District 29:	Guernsey County	38,579
	Noble County	10,982
	Washington County	51,689
	Morgan County Townships—	
	Bloom Township	641
	Bristol Township	424
	Center Township	524
	Malta Township	1,749
	Manchester Township	227
	Marion Township	1,371
	Meigsville Township	608
	Morgan Township	2,753
	Penn Township	625
	Windsor Township	1,557
	TOTAL	111,634
House District 30:	Belmont County	23,264
	Monroe County	15,268
	TOTAL	99,132
House District 31:	Holmes County	21,561
	Coshocton County	32,224
	Tuscarawas County Townships—	
	Wayne Township	1,589

	Willowick Township	
	Willowick City	18,749
	TOTAL	97,517
House District 38:	Ashtabula County	93,067

LARGE COUNTIES DIVIDED INTO INDIVIDUAL DISTRICTS

House District 39:	Butler County Townships—	
	Oxford Township	11,909
	Reily Township	1,629
	Milford Township	2,135
	Hanover Township	4,958
	Wayne Township	2,348
	St. Clair Township (other than part south of City of Hamilton)	5,906
	Madison Township	9,286
	Middletown City	42,115
	Lemon Township	14,415
	Liberty Township	3,143
	TOTAL	97,844
House District 40:	Butler County Townships—	
	Morgan Township	2,174
	Ross Township	3,340
	Fairfield Township	16,023
	St. Clair Township (parts south of City of Hamilton)	1,105
	Union Township	6,236
	Hamilton City	72,354
	TOTAL	101,232
House District 41:	Cuyahoga County Township and Wards—	
	Cleveland City Ward 24	29,629
	Bratenahl Township—	
	Bratenahl Village	1,332
	Cleveland City Ward 25	31,170
	Cleveland City Ward 27	22,704
	TOTAL	84,835
House District 42:	Cuyahoga County Wards—	
	Cleveland City Ward 20	29,986
	Cleveland City Ward 21	25,365
	Cleveland City Ward 22	29,560
	Cleveland City Ward 28	22,061
	TOTAL	106,972
House District 43:	Cuyahoga County Wards—	
	Cleveland City Ward 16	24,568
	Cleveland City Ward 18	20,453
	Cleveland City Ward 19	24,866
	Cleveland City Ward 29	22,697
	TOTAL	92,586
House District 44:	Cuyahoga County Wards—	
	Cleveland City Ward 10	26,986
	Cleveland City Ward 23	23,158
	Cleveland City Ward 30	42,742
	TOTAL	92,883
House District 45:	Cuyahoga County Townships and Wards—	
	Cleveland City Ward 14	20,117
	Cleveland City Ward 15	25,013
	Brooklyn Heights Township—	
	Brooklyn Heights Village	1,449
	Newburgh Heights Township—	
	Newburgh Heights Village	3,512
	South Newburgh—Warrensville Township—Garfield Heights City	38,455
	Willow Township—	
	Cuyahoga Heights Village	796
	TOTAL	89,341
House District 46:	Cuyahoga County Wards—	
	Cleveland City Ward 11	21,446
	Cleveland City Ward 12	13,962

	Olmsted Falls Village	2,144
	Westview Township—	
	Westview Village	1,303
	Berea Township—Berea City	16,592
	Westlake-Dover Township—	
	Westlake City	12,906
	TOTAL	103,236
House District 53:	Cuyahoga County Township and Ward—	
	Cleveland City Ward 32	25,865
	Euclid Township—Euclid City	62,998
	TOTAL	88,863
House District 54:	Cuyahoga County Townships—	
	East Cleveland Township—	
	East Cleveland City	37,991
	Cleveland Heights Township—	
	Cleveland Heights City	61,813
	TOTAL	99,804
House District 55:	Cuyahoga County Townships and Ward—	
	Cleveland City Ward 26	27,771
	Richmond Heights Township—	
	Richmond Heights City	5,068
	South Euclid Township—	
	South Euclid City	27,569
	Highland Heights Township—	
	Highland Heights Village	2,929
	S.O.M. Township—	
	Mayfield Village	1,977
	Riverside-Gates Mills Township—	
	Gates Mills Village	1,588
	Mayfield Township—	
	Mayfield Heights City	13,478
	Euclidville Township—	
	Lyndhurst City	16,805
	TOTAL	97,185
House District 56:	Cuyahoga County Townships—	
	Idlewood Township—	
	University Heights City	16,641
	Shaker Township—	
	Shaker Heights City	36,460
	Beachwood Township—	
	Beachwood City	6,069
	Pepper Pike Township—	
	Pepper Pike Village	3,217
	Hunting Valley Township—	
	Hunting Valley Village	550
	Warrensville Township	13,558
	Woodmere Township—	
	Woodmere Village	398
	Orange Township—	
	Moreland Hills Village	2,188
	Garfield Township—Orange Village	2,006
	Chagrin Falls Township	3,523
	Bentleyville Township—	
	Bentleyville Village	301
	Solon Township—Solon City	6,333
	Glenwillow Township—	
	Glenwillow Village	359
	TOTAL	91,623
House District 57:	Cuyahoga County Townships—	
	Bedford Heights Township—	
	Bedford Heights City	5,275
	Oakwood Township—	
	Oakwood Village	3,283
	Bedford Township—Bedford City	15,223
	Maple Heights Township—	
	Maple Heights City	31,667
	Walton Hills Township—	
	Walton Hills Village	1,776
	South View Township—	
	Valley View Village	1,221
	East Independence Township—	
	Independence City	6,868
	Independence Township—	
	Seven Hills City	5,706

APPENDIX G

AFFIDAVIT
of
HOWARD D. HAMILTON

Now comes Howard D. Hamilton and being first duly cautioned and sworn, deposes and says as follows:

"My name is Howard D. Hamilton. I am Chairman of the Department of Political Science, Bowling Green State University, Bowling Green, Ohio. As part of my work in the field of political science I have studied the problem of apportionment and have edited a text entitled '*Legislative Apportionment: Key to Power,*' (Harper and Rowe, 1964) and various articles on apportionment including one '*Legislative Apportionment in Indiana: Some Observations and a Suggestion,*' *Notre Dame Lawyer*, May, 190.

"I have studied the apportionment of the Ohio House of Representatives and the Ohio Senate through the use of statistical forms in analysis (explained hereinafter) which are commonly used by political scientists in evaluating the representativeness of an apportionment plan.

"I will set out herein the basis for my conclusion.

"My conclusion itself is that the Constitution of the State of Ohio, Article XI, can be followed, after eliminating those requirements which are in conflict with the Equal Protection Clause of the Fourteenth Amendment of the United States Constitution, to achieve substantially equal legislative representation.

"My attached study shows the statistical results achieved by reapportioning the Ohio House on the basis of the Ohio Constitution with the following changes: (1) elimination of the Hanna amendment and; (2) increase in the minimum ratio per Representative from .50 ratio ('one-half' ratio) to .85 ratio.

"I have set forth in my study a proposed plan of apportionment for the decennium 1963-71 and a map of said plan. My study shows that 48.0% of the people would be represented by a majority of the Representatives in the Ohio House in the 1967 General Assembly. Computed on a decennium basis, 49.1% of the people would be represented by a majority of the Representatives during the decennium.

The attached study, which I incorporate by reference herein, is an unpublished paper and presents the ideas and information which caused me to arrive at the aforementioned conclusions.

Further affiant saith not.

HOWARD D. HAMILTON

STATE OF OHIO
COUNTY OF FRANKLIN, ss:

Howard D. Hamilton, being first duly cautioned and sworn, deposes and says that the facts stated in the foregoing affidavit are true.

HOWARD D. HAMILTON

Sworn to before me and subscribed in my presence, this 12th day of October, 1965.

STEWART R. JAFFY

APPRAISAL OF THE OHIO "FLOATING FRACTION"

Howard D. Hamilton*

The "floating fraction" system has been Ohio's technique of equalizing representation since adoption of the 1851 constitution. It is an arrangement which equalizes representation without dividing counties in establishing senate and house districts. The constitutional formula grants any county whose population materially exceeds the ratio of

* Chairman, Department of Political Science, Bowling Green State University.

representation an additional representative or senator for some of the five legislatures of each decennium. If the population surplus is 20% above a whole ratio, the county is assigned an additional seat for one session; for a surplus of 40% above a whole ratio, a seat for two sessions, etc. It is a system of equalization over the decennium of an apportionment.

Thus the membership of the Ohio legislature fluctuates somewhat from session to session. During 1963-71 the membership of the House will range from 137 to 140, and the Senate from 32 to 36 seats. This equalization technique is unusual; but it is not unique. The Oklahoma constitution, prior to a recent amendment, had the same arrangement, a verbatim copy of Ohio's constitutional provision.[1]

Methods of Equalizing Representation

The problem originates in the conjunction of demography and the American tradition of employing counties as units for representation in legislatures (except in New England where the "town" was the major unit of local government). Inevitably some counties will have a large surplus or remainder. Without some equalizing arrangement the population per representative may vary as much as two to one. If a state seeks to achieve equal representation, a matter of keen concern to the Ohio constitutional convention in 1851, there must be some equalizing method.

Perusal of the apportionment laws for the ninety-nine state legislative chambers reveals four equalization methods: (1) single-member districts which ignore county lines, (2) the floterial district superimposed on the regular

[1] The Oklahoma formula was a standard for the legislature, but the legislature did not reapportion at all.

district pattern, (3) multimember-multicounty districts, and (4) the Ohio-Oklahoma floating fraction.[2]

Floterial Districts

Five states—Indiana, Oregon, Tennessee, Texas and Virginia—use the floterial district device, where a district is superimposed on the regular districting pattern. The arrangement is called a "joint" district in Indiana, a "floater" in Virginia, and a "floterial" in Tennessee and Texas.[3] It was defined by Chief Justice Warren in a Virginia case as "a district which includes within its boundaries several separate districts or political subdivisions which independently would not be entitled to additional representation but whose conglomerate population entitles the area to another seat."[4]

Indiana uses this method extensively and its districts may be examined for evaluation. Under the 1965 Indiana reapportionment, eight of the thirty-eight senate districts and eight of fifty-eight house districts are floterials.[5] In every instance the floterial is employed to furnish full representation to an urban county, which has a substantial surplus population above the ratio of representation. Thus, Marion County (Indianapolis) with a population of 697,567 is a senate district with seven seats. It has a surplus remainder of 44,817. (Surplus = 697,567 — (7 x 93,250)). Consequently, it is combined with adjacent Morgan (33,875) and Hendricks (40,896) counties to constitute a single seat

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[2] Perhaps a fifth possibility is to have a chamber of several hundred members, as in a couple New England states.

[3] Virginia, Texas, and Oregon have only a few such districts. In Oregon it is used to accommodate sparsely populated counties. Its three floterials are combinations of a wilderness county with a more populous, the latter also being a house district in its own right.

[4] *Davis vs. Mann*, 377 U.S. 678 (1964)

[5] Ch. 235, *Indiana Acts, 1965.*

district. Each of the sixteen floterials is one of the populous counties with one or two adjacent counties attached to it.

An obvious disadvantage of that system is its ambiguity. Do the residents of Marion County have seven senators, 7 1/3 (prorating counties), 7 9/10 (prorating by county populations), 7 4/10 (prorating by Marion's remainder), or eight senators? And how much representation do the residents of Morgan and Hendricks have? Is the residence of the "joint" senator a factor? This is an insoluble conumdrum; it baffled Justices Clark and Harlan in *Baker v. Carr*.[6]

A federal court viewed the floterial district separately, saying that the floterial of 772,338 population was indefensibly large in comparison with all of the non-floterial districts, ergo a denial of equal representation.[7]

The court also found under-representation of the two suburban counties which share the senator with Marion. This is the paramount defect of the floterial district (as employed by Indiana). The arrangement is beneficial to the urban or metropolitan county, but disadvantageous to the hinterland counties, which in elections become the dog's tail. Patently the voters in Hendricks and Morgan counties will be swamped by the Marion County electorate.

The floterial device has another ambiguity. Which of the numerous counties with remainders shall be entitled to additional representation by a floterial? And how shall the remainder be evaluated, by heads or as a percentage of the mean? The Indian legislature counted the surplus heads in Marion County, and thus Marion was rather clearly en-

[6] Justice Clark prorated by the number of counties in a district and deemed the Tennessee districts a "crazy quilt." Justice Harlan prorated by county populations and purported to find some rationality in a sixty-year old law!

[7] Toledo *Blade*, September 21, 1965, p. 3.

titled to additional representation. But if it had elected to compare the Marion population per seat (697,567 ÷ 7 = 99,652) with the mean, Marion would not have been entitled to additional representation.

The foregoing ambiguity and the discretion of the legislature in selecting which peripheral counties to use in building a floterial offers abundant opportunity for gerrymandering. It was principally by judicious construction of floterial districts that the 1965 Indiana assembly achieved a Democratic Party advantage of about three seats in both chambers, within a districting pattern of remarkable population equality.[8]

Multi-Member, Multi-County Districts

Another possible way to equalize would be to create some two-member districts of two or more counties. Thus a county with 1.6% of a ratio might be joined to a smaller neighbor, of say .5 ratio, to comprise a two-seat district. A few states have such districts.[9] Whether their *raison d'etre* is equalization is unknown to the writer.

This method is even more ambiguous than the floterial device, and probably offers the maximum opportunity for gerrymandering. Almost innumerable combinations would be possible, each having significance for the fortunes of candidates, and parties. Used with restraint and pursuant to clearly enunciated criteria, this could be a very useful equalizing device. Used with *carte blanch* authority it would likely result in extensive controvery and gerrymandering.

[8] The average district deviation was less than 6%. The Indiana House had 100 seats; the senate, 50.

[9] A 1962 canvass of districts disclosed 53 multi-county, multi-member house districts out of a total of 4,000 and 62 such senate districts out of 1,700. Most had two seats. David and Eisenberg, *State Legislative Redistricting*, p. 20.

Single-Member Districts Sans County Lines

In Ohio as elsewhere single-member districts cannot achieve a modicum of equal representation without crossing county lines rather frequently. Michigan recently has taken this road to equal representation. The apportionment ordered by the Michigan Supreme Court, June, 1964, is the acme of population equality. The maximum district deviation is only 3% and the average deviation is below 1%. But it was not costless. Indeed one may doubt whether the nearly perfect population equality was worth the cost when one looks at the district boundaries which snake through counties along township and municipal lines.

The new Michigan maps have the most interesting geometrical designs, which call for an expansion of our vocabulary. There are saddlebag, dumbbell, and shoestring districts, plus a plethora of novel and exotic designs awaiting nomenclature. Among the exotic is the 88th house district, a sliver comprised of one whole county and slices of three others. The 20th senate consists of two counties and slices of three others. Several districts are only aggregations of bits of several counties. Many counties are sliced into three parts (Oakland into four).

Freely crossing county lines in this manner without visible guiding and constraining criteria can only engender endless controversy and gerrymandering, or at least widespread suspicion of gerrymandering. A computer could district across county lines, aggregating municipalities and townships, in an objective fashion. A legislature or an apportionment board composed of politicians is unlikely to divide counties in utter disregard of all "extraneous" considerations. Furthermore, the computer can be programmed to achieve political objectives simultaneously with equalized districts.

The Relevance of Counties

The Michigan apportionment suggests a fundamental question: How important, how much value is the traditional use of counties as the basis of legislative districts? Is it merely a relic of the nineteenth century no longer relevant to the society of the latter twentieth century, which merely lingers on by inertia?

Indubitably the county has less relevance now than in 1851, because many counties have ceased to be socio-economic or "natural" communities. Cities and metropolitan areas are the paramount foci of present day communities. But this does not make counties unsuitable for representation, because in most instances there is a county corresponding to the city. Thus Franklin County is perhaps the best way of delineating the Columbus community, Lucas County, the Toledo community, etc. It is significant perhaps that the Census Bureau delineates metropolitan areas by county lines. Furthermore, there is a high correlation between county lines and "political communities," i.e., the people who read the same newspapers and are concerned with the same local political issues and problems.

There are at least three concrete advantages of not splitting counties in drawing legislative districts: (1) it correlates representation with county government. A very substantial part of the legislatures grist continues to be local government matters, often relating to one county even if wrapped in the cellophane of general law, (2) political party organization continues to be by county, (3) it facilitates the printing of ballots and other aspects of election administration. One must conclude that the county continues to be a useful basis for structuring legislative districts; the practice of many states—perhaps most—of never crossing county lines is not just blind inertia.

The Floating Fraction

The Ohio floating fraction has the advantage of maintaining the integrity of counties as does two of the other equalizing devices, but it appears to be free of some of the disadvantages of the alternative methods. The conspicuous merit of Ohio's system is that not only does it achieve a degree of equalization which matches the other (except Michigan's abandonment of county lines), but it has precise standards which make reapportionment largely automatic and minimized controversy and misunderstanding. The importance of clear cut criteria, which make the role of the Apportionment Board essentially ministerial, and which closes the door to gerrymandering appears to have been recognized by the Ohio constitutional convention in 1851. Few, if any, states have designed arrangements which achieve those objectives as well.

One can argue to doomsday over the abstract question of whether equalization over the decade is fair treatment for a district. Heretofore the issue has not been terribly important, because only ten of the eighty-eight house districts were involved. Elimination of the "Hanna Amendment" will make the matter quantitatively more significant. Using a divisor of 100, there would be twelve districts with floating fractions during a decennium. Whether equalizing over the decade would be just treatment of those districts involves a value judgment. Patently the "constitutional fathers" of 1851 thought so and so we see a rational state policy in existence which does not subvert population.

The Ohio House, when constituted as per the Ohio Constitution and with .85 ratio as a minimum district population, becomes one of the most equitable apportioned legislatures in the nation, *even when one looks at a single session or the decennium*, see Table II and Table XIV in the Appendix.

Summary

In Part II all the statistical methods of measuring apportionment are employed to appraise the effectiveness of the flowing fraction as an equalizing device. Every statistical yardstick indicates that it is remarkably effective. The Ohio Senate is one of the most equally apportioned chambers in the nation. If .85 ratio were the minimum, the Ohio House would become a model for the nation, rivalled only by Michigan, post-1964.

At this point let us summarize the merits of the four equalization methods. Each has the potential for equal apportionment; each can achieve an average deviation of 5% or less. However none is without weakness and disadvantages.

All methods, except the floating fraction, have two major defects: ambiguity—the lack of standards, and a tremendous potential for gerrymandering. The single-member district freely crossing county lines has additional disadvantages: splitting up communities, handicapping election administration, and breeding confusion.

The superiority of the floating fraction method is the precision of standards and procedures. The standards have the objectivity and precision of mathematics (being so) and their application is semi-automatic. While the system is not entirely automatic, but largely so, there is scant opportunity for gerrymandering. The black boundaries in the appended maps, Appendix Map I, shows the only areas where discretion could be exercised by the Apportionment Board of Ohio.

The utility of objective, precise standards, and procedure can hardly be exaggerated. In their absence there will be acrimonious and protracted controvesy and the political

party in power will be tempted to seize its opportunity to gerrymander. Even if the majority party (of that year) resists temptation, the opposition will accuse it of gerrymandering and the public's confidence in its legislature is damaged.

PART II

STATISTICAL ANALYSIS OF OHIO FLOATING FRACTION

The effectiveness of the floating fraction is appraised in this analysis by applying the various statistical measures of apportionment to the senate as presently constituted, and to a house reapportioned according to the present Ohio Constitution with the following changes: (1) elimination of the Hanna amendment and; (2) raising the minimum ratio for a representative from .50 ("one-half" ratio) to .85 ratio. (See Appendix Table I and Map.)

The following tables employ every statistical yardstick normally used to measure equality of apportionment.

Ohio data has been calculated (by computer) on the basis of the 1963-71 decennium and for a single session, 1967. Detail data and maps are appended.

The Dauer-Kelsay Index

The Dauer-Kelsay index, the minimum percentage of the population needed to elect a majority of the chamber, is the most widely used measure. It consists simply of ranking representational units by population, proceeding from the smallest, until the aggregate population form a majority of the seats. The Table 1 below indicates the Dauer-Kelsay scale for the Ohio Senate and Reapportioned Ohio House.

Table 1. Dauer-Kelsay Index

Reapportioned Ohio House (Appendix Table I)	*Percent of Population to Elect Majority*
Decennium: 1963-71	49.1
Sessions:	
105th—1963	47.0
106th—1965	47.1
107th—1967	48.0
108th—1969	47.2
109th—1971	46.0
Ohio Senate	
Decennium: 1963-71	48.3
Sessions:	
105th—1963	43.8
106th—1965	45.1
107th—1967	45.9
108th—1969	43.0
109th—1971	40.2

Source: Appendix Tables II - VII and XVII - XXII

Using the Dauer-Kelsay method, the house apportioned in accordance with the state constitution, modified only by the requirement of .85 ratio as a minimum, would be over a decennium one of the most equitably apportioned chambers in the United States. Its Dauer-Kelsay score for a single session, disregarding the equalizing mechanism would range between 46 and 49%.

A Dauer-Kelsay score above 45% is excellent.

Maximum Population—Variance Ratio

Another widely used measure is the ratio of the largest district to the smallest one. This is a useful supplement to measures of central tendency which may not reveal the existence of unreasonably large or small districts.

Table 2. Ratio of Largest to Smallest District for Lower House

Reapportioned Ohio House (Appendix Table I)	*Largest/Smallest*
Decennium: 1963-71	1.4
Sessions:	
105th—1963	1.7
106th—1965	1.8
107th—1967	1.7
108th—1969	1.7
109th—1971	2.4
Ohio Senate	
Decennium: 1963-71	1.3
Sessions:	
105th—1963	2.0
106th—1965	1.9
107th—1967	1.8
108th—1969	2.2
109th—1971	3.4

Source: See Appendix Tables VIII and XXIII

Using a divisor of 100, with a 15% deviation, the constituents per member would vary only between 83,864 and 115,326, a ratio of 1.38 to 1, over the decennium distinctly superior to all legislatures in the nation except Michigan, post-1964.

Naturally under the Ohio formula the spread is larger for any single session. However, only three seats out of the 480 seats in the Ohio House apportioned with a .85 ratio minimum for the decennium, 1964-71, exceed a 1.9 to 1 ratio. In the Senate, there are only 14 seats out of a total of 170 for the decennium that exceed a 1.9 to 1 ratio.

Average Deviation

One of the best single measures of apportionment is percent average deviation. The amount that each representational unit's population deviates from the mean population per seat is calculated, summed, divided by the number of seats to get the average deviation in absolute terms, and then divided by the mean to express it as a percentage of the mean.

Table 3. Percent Average Deviation

Reapportioned Ohio House (Appendix Table I)

Decennium: 1963-71	3.1% (43.5)*
Sessions:	
105th—1963	7.3%
106th—1965	7.4
107th—1967	7.2
108th—1969	6.6
109th—1971	9.1

Ohio Senate

Decennium: 1963-71	5.3%
Sessions:	
105th—1963	15.6
106th—1965	16.6
107th—1967	12.6
108th—1969	14.1
109th—1971	23.5

Source: Appendix Tables IX - XIV and XXIV - XXIX

* Percentage Average Deviation of present Ohio House. Decennium, 1963-71. See Appendix Table XV.

In Table 3 the house apportioned by the floating fraction system with a minimum of .85 ratio is compared with its condition in 1965. Elimination of the "Hanna" provision and raising the minimum from .50 to .85 ratio removes the factors which have distorted the apportionment, and reduces the average deviation from 43.5% to 3.1%.

Inverse Coefficient of Variation

A more complex but superior measure is the Inverse Coefficient of Variation. ICV is a reciprocal of the direct coefficient of variation, which is the standard deviation (sigma) divided by the mean of any distribution. $CV = \sigma/M$. CV is not only statistically sound, but it also permits interstate comparisons.

Professors Glendon Schubert and Charles Press applied this mean to all 99 state chambers as of March, 1962, the date of *Baker vs. Carr*.[10] For the convenience of common use, they used the reciprocal of CV:

$$ICV = \frac{1}{1 + \sigma/M}$$

This produces a range of scores between 0 and 1.00. If all representational units were absolutely equal in population, the ICV would be 1.00, an obvious improbability. Schubert and Press state that an ICV score of .83 "is the model for the closest approximation of the ideal that offers any realistic possibility of being attained for any American legislature."[11]

How close to this standard for good apportionment ICV score .83 are the Ohio Senate and House? And how do they compare with other states? The answers are in Table 5.

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[10] Glendon Schubert and Charles Press, "Measuring Malapportionment," 63 *American Political Science Review*, 302-27 (June 1964). Revised data in "Malapportionment Remeasured," *Ibid*, pp. 697-970.

[11] *Ibid*, p. 319.

Table 5. Inverse Coefficient of Variation State Legislatures, March 1962

Senate			*House*		
Rank	*State*	*ICV*	*Rank*	*State*	*ICV*
1	Massachusetts	.86	1	S. Carolina	.84
2	Arkansas	.81	2	Oregon	.81
3	Wisconsin	.80	3	Mississippi	.76
4	OHIO	.79	4	Illinois	.75
26	Michigan	.60	23	OHIO	.67
49	Nevada	.33	48	Georgia	.43
50	California	.29	49	Connecticut	.39
			50	Vermont	.35

Present Ohio Senate		*Reapportioned Ohio House (Appendix Table I)*	
Decennium: 1963-71	.94	Decennium: 1963-71	.95
Session: 1967	.86	Session: 1967	.90

Source: Cf. Table 6.

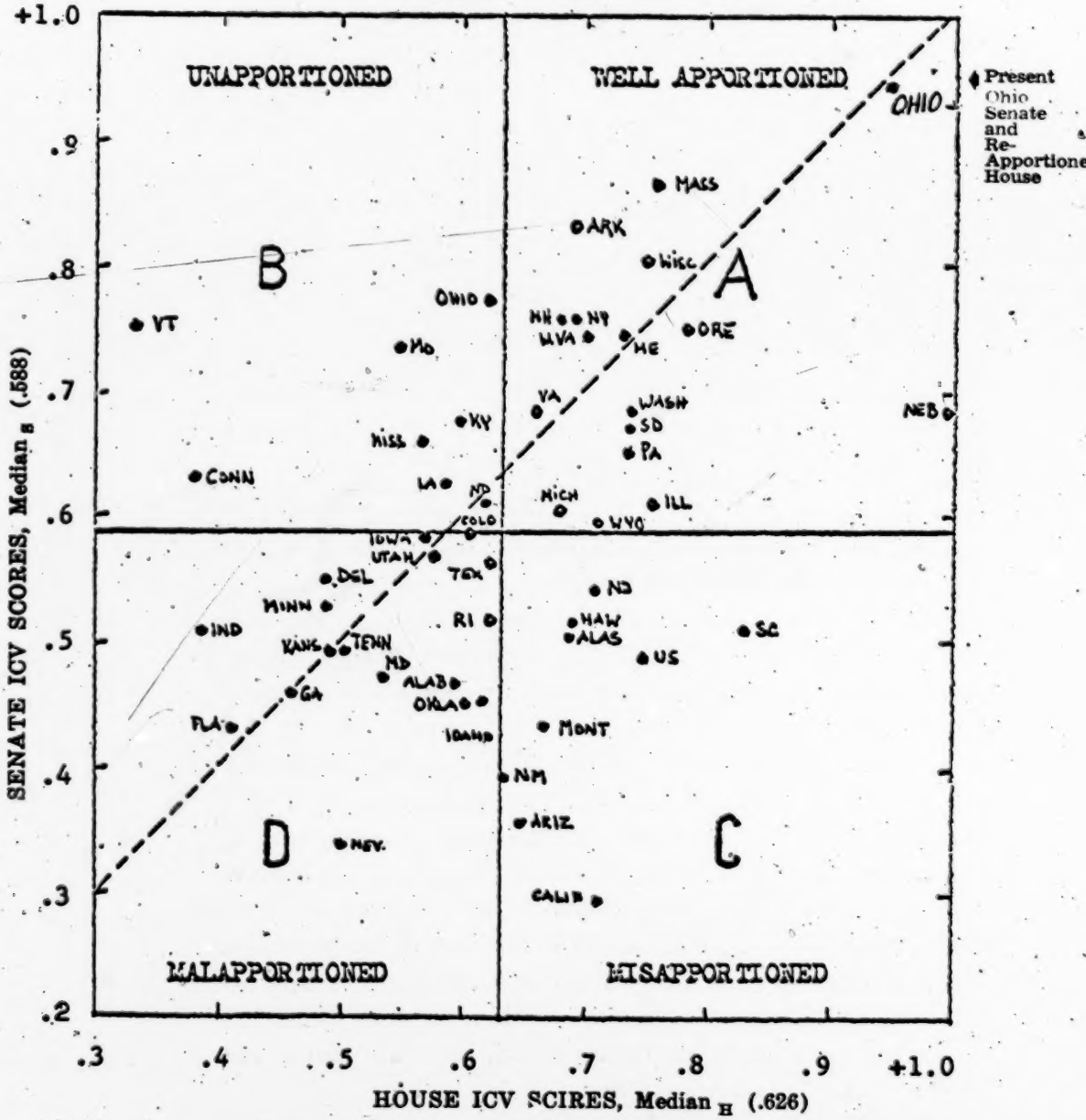
As of March, 1962 the ICV for the Ohio Senate was .79, ranking fourth in the nation. That was before the reapportionment for the current decade.

Now the senate ICV is .94 for the decennium. For any single session inevitably it is slightly lower. We have computed it for the 1967 session: .86. So calculated over the decade, thus taking into account of the floating fraction system, the apportionment of the Ohio Senate is distinctly superior to all other senates (except Michigan, post-1964). Viewing a single session, disregarding the equalizing mechanism, it still is at the front of the parade and above the standard suggested by Schubert and Press!

The house ICV was .67 in 1962, ranking in twenty-third place. For the current decennium it is .68. This results because of the Hanna provision, which in recent years has prevented any significant equalization, the Ohio House has been essentially unapportioned.

But if .85 ratio were the minimum population for a seat, the house ICV score would be .95 for the decennium and .90 for the 1967 session, and a model for the nation. Observe the scattergram, Chart 1, Page 48a.

Chart 1. INVERSE COEFFICIENT OF VARIATION STATE LEGISLATURES, June 1962



The apportionment of American Legislatures, as measured by variance in the population of representational units (as of March 26, 1962).

Sources: Schubert and Press, "Measuring Malapportionment", *Am. Pol. Sci. Rev.*, June, 1964, p. 823. Current Ohio data added.

Schubert-Press Apportionment Score

Schubert and Press devised a formula for measuring the apportionment of an entire legislature. It is a bit recondite and requires a computer. The major element is ICV, supplemented by indices of skewness and kurtosis. Index of skewness tells how close a distribution is to a "normal curve;" the index of kurtosis indicates the peakness of the curve. Both are useful refinements. Schubert and Press combined the scores for kurtosis and skewness by matrix techniques, to get G_s and G_h in their equation:

$$\text{Apportionment Score} = 60\ (ICV_s + G_s) + 40\ (ICV_h + G_h)$$

Ohioans may be surprised to learn that this formula gave the Ohio legislature the highest score in the nation, as of March, 1962. The explanation for this phenomenon is that the S-P formula weights the senate 3 to the house 2. Since the Ohio Senate is so well apportioned, the formula gave Ohio first place despite Ohio's malapportioned house.

Table 6. Apportionment Scores of State Legislatures, March 1962 (Schubert-Press Formula; Senate weighted 3, House 2)

(Schubert-Press Formula; Senate weighted 3, House 2)

Rank	*State*	*Apportionment Score*
1	OHIO	90.3
2	Oregon	89.0
3	New Hampshire	88.0
10	Indiana	69.8
25	Illinois	47.2
30	Michigan	44.1
50	Georgia	— 4.9
	Present Ohio Senate and Reapportioned Ohio House (Appendix Table I):	
	Decennium: 1963-71	108.4
	Session: 1967	101.6

Sources: Glendon Schubert and Charles Press, "Malapportionment Remeasured," *Am. Pol. Sci. Review*, Dec. 1964, pg. 969; and computer application of S-P formula to data in Appendix Table I.

If the malapportionment of the House were corrected by establishing .85 ratio as the minimum for a seat, the Ohio legislature would crash through the ceiling with an apportionment score of 108.4. For a single session, 1967, ignoring the equalization mechanism, the score would be 101.6.

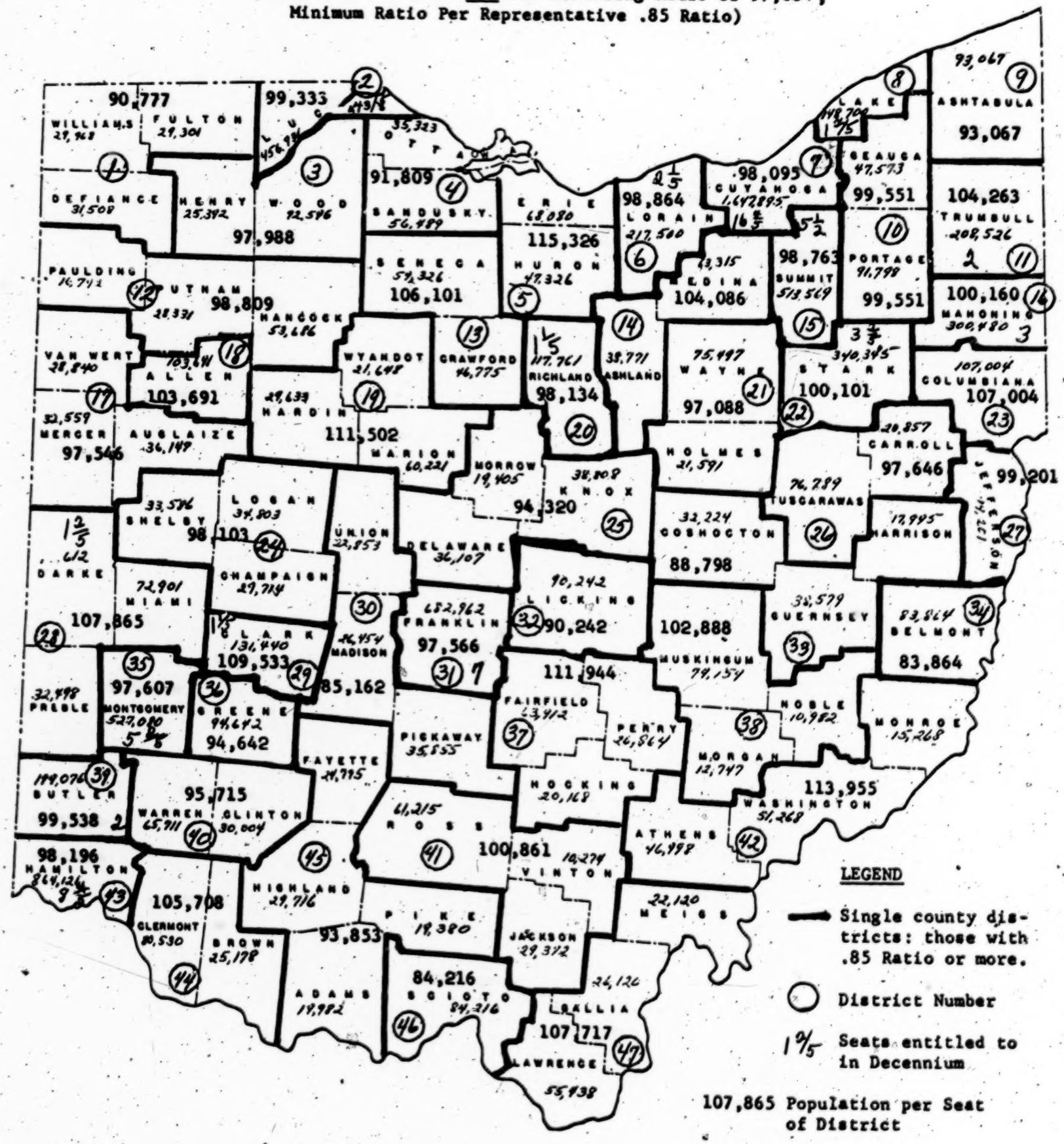
CONCLUSION

Measured by every conceviable statistical yardstick, the Ohio Senate is one of the best apportioned chambers in the nation. In recent years the house has been seriously malapportioned, because of the .50 ratio provision and the 'Hanna'' provision nullified the floating fraction system. If a .85 ratio were the minimum population for a district, the house apportionment would be a model for the rest of the nation.

APPENDIX MAP I

REAPPORTIONED OHIO HOUSE
Seats and Populations of House Districts

(Based on Divisor of 100 and Resulting Ratio of 97,064, Minimum Ratio Per Representative .85 Ratio)



APPENDIX TABLE I

Reapportioned Ohio House*, 1963-71
(Divisor, 100; Ratio, 97,064)

District	County	1960 Population	Ratios	Decennium Seats	Decennium Population Per Seat	Decennium Percent Deviation	Seats Per Session 1963	1965	1967	1969	1971
	Williams	29,968	.31								
	Defiance	31,508	.32								
	Fulton	29,301	.30								
1		90,777	.92	1	90,777	-08	1	1	1	1	1
2	Lucas	456,931	4.71	4 3/5	99,333		5	4	4	5	5
	Henry	25,392	.26								
	Wood	72,596	.75								
3		97,988	1.01	1	97,988	-01	1	1	1	1	1
	Ottawa	35,323	.36								
	Sandusky	56,486	.58								
4		91,809	.94	1	91,809	-07	1	1	1	1	1
	Erie	68,000	.70								
	Huron	47,326	.49								
5		115,326	1.19	1	115,326	16	1	1	1	1	1
6	Lorain	217,500	2.24	2 1/5	98,964		2	2	2	2	3
7	Cuyahoga	1,647,895	16.98	16 4/5	98,095	-01	17	17	17	17	16
8	Lake	148,700	1.53	1 2/5	106,214	07	1	1	2	2	1
9	Ashtabula	93,067	.96	1	93,067	-06	1	1	1	1	1
	Geauga	47,573	.49								
	Portage	91,798	.95								
10		139,371	1.54	1 2/5	99,551	01	1	1	2	2	1
11	Trumbull	208,526	2.15	2	104,263	05	2	2	2	2	2
	Paulding	16,792									
	Putnam	28,331									
	Hancock	53,686									
12		98,809	1.01	1	98,809		1	1	1	1	1
	Seneca	59,326	.61								
	Crawford	46,775	.48								
13		106,101	1.09	1	106,101	07	1	1	1	1	1

* Based on present Ohio Constitution, adjusted in following manner:
(1) elimination of Hanna amendment.
(2) increase in minimum ratio per representative from .50 to .85 ratio.

District	County	1960 Population	Ratios	Decennium Seats	Decennium Population Per Seat	Decennium Percent Deviation	Seats Per Session 1963	1965	1967	1969	1971
	Ashland	38,771	.40								
	Medina	65,315	.67								
14		104,086	1.07	1	104,086	05	1	1	1	1	1
15	Summit	513,569	5.29	5 1/5	98,763		5	5	5	5	6
16	Mahoning	300,480	3.10	3	100,160	01	3	3	3	3	3
	Van Wert	28,840	.30								
	Mercer	32,559	.34								
	Auglaize	36,147	.37								
17		97,546	1.01	1	97,546	-02	1	1	1	1	1
18	Allen	103,691	1.07	1	103,691	05	1	1	1	1	1
	Wyandot	21,648	.22								
	Hardin	29,633	.31								
	Marion	60,221	.62								
19		111,502	1.15	1	111,502	13	1	1	1	1	1
20	Richland	117,761	1.21	1 1/5	98,134	-01	1	1	1	1	2
	Wayne	75,497	.78								
	Holmes	21,591	.22								
21		97,088	1.00	1	97,088	-02	1	1	1	1	1
22	Stark	340,345	3.51	3 2/5	100,101	01	3	3	4	4	3
23	Columbiana	107,004	1.10	1	107,004	08	1	1	1	1	1
	Shelby	33,586	.35								
	Logan	34,803	.36								
	Champaign	29,714	.31								
24		98,103	1.01	1	98,103	-01	1	1	1	1	1
	Morrow	19,405	.20								
	Delaware	36,107	.37								
	Knox	38,808	.40								
25		94,320	.97	1	94,320	-05	1	1	1	1	1
	Tuscarawas	76,789	.79								
	Carroll	20,857	.21								
26		97,646	1.00	1	97,646	-01	1	1	1	1	1
27	Jefferson	99,201	1.02	1	99,201		1	1	1	1	1
	Darke	45,612	.47								
	Miami	72,901	.75								
	Preble	32,498	.33								
28		151,011	1.55	1 2/5	107,865	09	1	1	2	2	1
29	Clark	131,440	1.35	1 1/5	109,533	11	1	1	1	1	2

District	County	1960 Population	Ratios	Decennium Seats	Decennium Population Per Seat	Decennium Percent Deviation	Seats Per Session 1963	1965	1967	1969	1971
	Union	22,853	.24								
	Madison	26,454	.27								
	Pickaway	35,855	.37								
30		85,162	.86	1	85,162	-14	1	1	1	1	1
31	Franklin	682,962	7.04	7	97,566	-01	7	7	7	7	7
32	Licking	90,242	.93	1	90,242	-09	1	1	1	1	1
	Coshocton	32,224	.33								
	Guernsey	38,579	.39								
	Harrison	17,995	.19								
33		88,798	.91	1	88,798	-10	1	1	1	1	1
34	Belmont	83,864	.86	1	83,864	-15	1	1	1	1	1
35	Montgomery	527,080	5.43	5 2/5	97,607	-01	5	5	6	6	5
36	Greene	94,642	.98	1	94,642	-04	1	1	1	1	1
	Fairfield	63,912	.66								
	Perry	27,864	.29								
	Hocking	20,168	.21								
37		111,944	1.15	1	111,944	11	1	1	1	1	1
	Muskingum	79,159	.82								
	Morgan	12,747	.13								
	Noble	10,982	.11								
38		102,888	1.06	1	102,888	04	1	1	1	1	1
39	Butler	199,076	2.05	2	99,538		2	2	2	2	2
	Warren	65,711	.68								
	Clinton	30,004	.31								
40		95,715	.99	1	95,715	-03	1	1	1	1	1
	Ross	61,215	.63								
	Vinton	10,274	.11								
	Jackson	29,372	.30								
41		100,861	1.04	1	100,861	02	1	1	1	1	1
	Athens	46,998	.48								
	Washington	51,689	.53								
	Monroe	15,268	.16								
42		113,955	1.17	1	113,955	15	1	1	1	1	1
43	Hamilton	864,121	8.90	8 4/5	98,196	-01	8	9	9	9	9

District	County	Population	Ratios	Decennium Seats	Decennium Population Per Seat	Decennium Percent Deviation	Seats Per Session 1963	1965	1967	1969	1971
	Clermont	80,530	.83								
	Brown	25,178	.26								
44		105,708	1.09	1	105,708	07	1	1	1	1	1
	Fayette	24,775	.26								
	Highland	29,716	.31								
	Pike	19,380	.20								
	Adams	19,982	.21								
45		93,853	.97	1	93,853	-05	1	1	1	1	1
46	Scioto	84,216	.87	1	84,216	-15	1	1	1	1	1
	Meigs	22,159	.23								
	Gallia	26,120	.27								
	Lawrence	55,438	.57								
47		103,717	1.07	1	107,717	09	1	1	1	1	1
TOTAL				98			95	95	100	101	99

APPENDIX TABLE II

Minimum Percentage Needed To Elect
A Majority (50) in Reapportioned Ohio House

Decennium, 1963-1971

District	Representatives	Population Per Representative	District Population
34	1		83,864
46	1		84,216
30	1		85,162
33	1		88,798
32	1		90,242
1	1		90,777
4	1		91,809
9	1		93,067
45	1		93,853
25	1		94,300
36	1		94,642
40	1		95,715
21	1		97,088
17	1		97,546
31	7	97,566	682,962
35	5 2/5	97,607	527,080
26	1		97,646
3	1		97,988
7	16 4/5	98,095	1,647,895
24	1		98,103
20	1 1/5		98,134
43	2 3/5	98,196	255,310
	50		4,766,217

Percent of state's population needed to elect majority = $\frac{4,766,217}{9,706,397}$ = 49.1%

APPENDIX TABLE III

Minimum Percentage Needed To Elect
A Majority (48) in Reapportioned Ohio House

105th Session, 1963

District	Representatives	Population Per Representative	District Population
34	1		83,864
46	1		84,216
30	1		85,162
33	1		88,798
32	1		90,242
1	1		90,777
2	5	91,386	456,931
4	1		91,809
9	1		93,067
45	1		93,853
25	1		94,320
36	1		94,642
40	1		95,715
7	17	96,935	1,647,895
21	1		97,088
17	1		97,546
31	7	97,566	682,962
26	1		97,646
3	1		97,988
24	1		98,103
12	1		98,809
27	1		99,201
	48		4,560,684

Percent of state's population needed to elect majority = $\frac{4,560,684}{9,706,397}$ = 47.0%

APPENDIX TABLE IV

Minimum Percentage Needed To Elect A Majority (48) in Reapportioned Ohio House

106th Session, 1965

District	Representatives	Population Per Representative	District Population
34	1		83,864
46	1		84,216
30	1		85,162
33	1		88,798
32	1		90,242
1	1		90,777
4	1		91,809
9	1		93,067
45	1		93,853
25	1		94,320
40	1		95,715
43	9	96,013	864,121
36	1		96,642
7	17	96,935	1,647,895
21	1		97,088
17	1		97,546
26	1		97,646
31	7	97,566	682,962
	48		4,575,723

Percent of state's population needed to elect majority = $\frac{4,575,723}{9,706,397}$ = 47.1%

APPENDIX TABLE V

Minimum Percentage Needed to Elect
A Majority (51) in Reapportioned Ohio House

107th Session, 1967

District	Representatives	Population Per Representative	District Population
10	2	69,685	139,371
8	2	74,350	148,700
28	2	75,505	151,011
34	1		83,864
46	1		84,216
30	1		85,162
35	6	87,846	527,080
33	1		88,798
32	1		90,242
1	1		90,777
4	1		91,809
9	1		93,067
45	1		93,853
25	1		94,320
36	1		94,642
40	1		95,715
43	9	96,013	864,121
7	17	96,935	1,647,895
21	1		97,088
	51		4,661,731

Percent of state's population needed to elect majority = $\frac{4,661,731}{9,706,397}$ = 48.0%

APPENDIX TABLE VI

Minimum Percentage Needed to Elect
A Majority (51) in Reapportioned Ohio House

108th Session, 1969

District	Representatives	Population Per Representative	District Population
10	2	69,685	139,371
8	2	74,350	148,700
28	2	75,505	151,011
34	1		83,864
46	1		84,216
22	4	85,086	340,345
30	1		85,162
35	6	87,846	527,080
33	1		88,798
32	1		90,242
1	1		90,777
2	5	91,386	456,931
4	1		91,809
9	1		93,067
45	1		93,853
25	1		94,320
36	1		94,642
40	1		95,715
43	9	96,013	864,121
7	9*	96,935	872,415
	51		4,586,439

Percent of state's population needed to elect majority $= \frac{4,586,439}{9,706,397} = 47.2\%$

* Only nine seats of Cuyahoga's 17 need in computation.

APPENDIX TABLE VII

Minimum Percentage Needed To Elect A Majority (50) in Reapportioned Ohio House

109th Session, 1971

District	Representatives	Population Per Representative	District Population
20	2	58,880	117,761
29	2	65,720	131,440
6	3	72,500	217,500
34	1		83,864
46	1		84,216
30	1		85,162
15	6	85,594	513,569
33	1		88,798
32	1		90,242
1	1		90,777
2	5	91,386	456,931
4	1		91,809
9	1		93,067
45	1		93,853
25	1		94,320
36	1		94,642
40	1		95,715
43	9	96,013	864,121
21	1		97,088
17	1		97,546
31	7	97,566	682,962
26	1		97,646
3	1		97,988
	50		4,461,017

Percent of state's population needed to elect majority = $\frac{4,461,017}{9,706,397}$ = 46.0%

APPENDIX TABLE VIII

POPULATION-RATIO VARIANCE
Reapportioned Ohio House

(All Districts Compared With Smallest District)*

District	Sessions					
	105th	106th	107th	108th	109th	Decennium
1	1.1	1.1	1.3	1.3	1.5	1.1
2	1.1	1.4	1.6	1.3	1.6	1.2
3	1.2	1.2	1.4	1.4	1.7	1.1
4	1.1	1.1	1.3	1.3	1.6	1.1
5	1.4	1.4	1.7	1.7	2.0	1.4
6	1.3	1.3	1.6	1.6	1.2	1.2
7	1.2	1.2	1.4	1.4	1.7	1.2
8	1.8	1.8	1.1	1.1	2.5	1.3
9	1.1	1.1	1.3	1.3	1.6	1.1
10	1.7	1.7	1.0	1.0	2.4	1.2
11	1.2	1.2	1.5	1.5	1.8	1.2
12	1.2	1.2	1.4	1.4	1.7	1.2
13	1.3	1.3	1.5	1.5	1.8	1.3
14	1.2	1.2	1.5	1.5	1.8	1.2
15	1.2	1.2	1.5	1.5	1.5	1.2
16	1.2	1.2	1.4	1.4	1.7	1.2
17	1.2	1.2	1.4	1.4	1.7	1.2
18	1.2	1.2	1.5	1.5	1.8	1.2
19	1.3	1.3	1.6	1.6	1.9	1.3
20	1.4	1.4	1.7	1.7	1.0	1.2
21	1.2	1.2	1.4	1.4	1.6	1.2
22	1.4	1.4	1.6	1.2	1.9	1.2
23	1.3	1.3	1.5	1.5	1.8	1.3
24	1.2	1.2	1.4	1.4	1.7	1.2

*Smallest District

105th	34th	83,864 per seat
106th	34th	83,864 per seat
107th	10th	69,685 per seat
108th	10th	69,685 per seat
109th	20th	58,880 per seat
Decennium	34th	83,864 per seat

District	Sessions					
	105th	106th	107th	108th	109th	Decennium
25	1.1	1.1	1.4	1.4	1.6	1.1
26	1.2	1.2	1.4	1.4	1.7	1.2
27	1.2	1.2	1.4	1.4	1.7	1.2
28	1.8	1.8	1.1	1.1	2.6	1.3
29	1.6	1.6	1.9	1.9	1.1	1.3
30	1.0	1.0	1.2	1.2	1.4	1.0
31	1.2	1.2	1.4	1.4	1.7	1.2
32	1.1	1.1	1.3	1.3	1.5	1.1
33	1.1	1.1	1.3	1.3	1.5	1.1
34	1.0	1.0	1.2	1.2	1.4	1.0
35	1.3	1.3	1.3	1.3	1.8	1.2
36	1.1	1.1	1.4	1.4	1.6	1.1
37	1.3	1.3	1.6	1.6	1.9	1.3
38	1.2	1.2	1.5	1.5	1.7	1.2
39	1.2	1.2	1.4	1.4	1.7	1.2
40	1.1	1.1	1.4	1.4	1.6	1.1
41	1.2	1.2	1.4	1.4	1.7	1.2
42	1.4	1.4	1.6	1.6	1.9	1.4
43	1.3	1.1	1.4	1.4	1.6	1.2
44	1.3	1.3	1.5	1.5	1.8	1.3
45	1.1	1.1	1.3	1.3	1.6	1.1
46	1.0	1.0	1.2	1.2	1.4	1.0
47	1.2	1.2	1.5	1.5	1.8	1.3

APPENDIX TABLE IX

PERCENT AVERAGE DEVIATION
Reapportioned Ohio House

Decennium, 1963-71

District	Population	Representatives	Population Per Representative	Percent Deviation	Dev. x Repr.
1	90,777	1	90,777	-08	
2	456,931	4 3/5	99,333		
3	97,988	1	97,988	-01	
4	91,809	1	91,809	-07	
5	115,326	1	115,326	16	
6	217,500	2 1/5	98,964		
7	1,647,895	16 4/5	98,095	-01	-16.8
8	148,700	1 2/5	106,214	07	9.8
9	93,067	1	93,067	-06	
10	139,371	1 2/5	99,551	01	1.4
11	208,526	2	104,263	05	10.0
12	98,809	1	98,809		
13	106,101	1	106,101	07	
14	104,086	1	104,086	05	
15	513,569	5 1/5	98,763		
16	300,480	3	100,160	01	3.0
17	97,546	1	97,546	-02	
18	103,691	1	103,691	05	
19	111,502	1	111,502	13	
20	117,761	1 1/5	98,134	-01	-1.2
21	97,088	1	97,088	-02	
22	340,345	3 2/5	100,101	01	3.4
23	107,004	1	107,004	08	
24	98,103	1	98,103	-01	
25	94,320	1	94,320	-05	
26	97,646	1	97,646	-01	
27	99,201	1	99,201		
28	151,011	1 2/5	107,865	09	12.6
29	131,440	1 1/5	109,533	11	13.2
30	85,162	1	85,162	-14	
31	682,962	7	97,566	-01	- 7.0
32	90,242	1	90,242	-09	

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District	Population	Representatives	Population Per Representative	Percent Deviation	Dev. X Repr.
33	88,798	1	88,798	-10	
34	83,864	1	83,864	-15	
35	527,080	5 2/5	97,607	-01	-5.4
36	94,642	1	94,642	-04	
37	111,944	1	111,944	11	
38	102,888	1	102,888	04	
39	199,076	2	99,538		
40	95,715	1	95,715	-03	
41	100,861	1	100,861	02	
42	113,955	1	113,955	15	
43	864,121	8 4/5	98,196	-01	-8.8
44	105,708	1	105,708	07	
45	93,853	1	93,853	-05	
46	84,216	1	84,216	-15	
47	103,717	1	103,717	09	
		98			302.6

Mean = 99,045

Average Deviation = $\frac{302.6}{98}$ = 3.1%

APPENDIX TABLE X

PERCENT AVERAGE DEVIATION
Reapportioned Ohio House

105th Session, 1963

District	Population	Representatives	Population Per Representative	Percent Deviation	Dev. x Repr.
1	90,777	1	90,777	-11.2	
2	456,931	5	91,386	-10.6	-53.0
3	97,988	1	97,988	-4.1	
4	91,809	1	91,809	-10.2	
5	115,326	1	115,326	12.8	
6	217,500	2	108,750	6.4	12.8
7	1,647,895	17	96,935	-5.2	-88.4
8	148,700	1	148,700	45.5	
9	93,067	1	93,067	-9.0	
10	139,371	1	139,371	36.4	
11	208,526	2	104,263	2.0	4.0
12	98,809	1	98,809	-3.3	
13	106,101	1	106,101	3.8	
14	104,086	1	104,086	1.8	
15	513,569	5	102,713	.5	2.5
16	300,480	3	100,160	-2.0	-6.0
17	97,546	1	97,546	-4.6	
18	103,691	1	103,691	1.4	
19	111,502	1	111,502	9.1	
20	117,761	1	117,761	15.2	
21	97,088	1	97,088	-5.0	
22	340,345	3	113,448	11.0	33.0
23	107,004	1	107,004	4.7	
24	98,103	1	98,103	-4.0	
25	94,320	1	94,320	-7.7	
26	97,646	1	97,646	-4.5	
27	99,201	1	99,201	-3.0	
28	151,011	1	151,011	47.7	
29	131,440	1	131,440	28.6	
30	85,162	1	85,162	-16.7	
31	682,962	7	97,566	-4.6	-32.2
32	90,242	1	90,242	-11.7	

District	Population	Representatives	Population Per Representative	Percent Deviation	Dev. x Repr.
33	88,798	1	88,798	-13.1	
34	83,864	1	83,864	-18.0	
35	527,080	5	105,416	3.1	15.5
36	94,642	1	94,642	7.4	
37	111,944	1	111,944	9.5	
38	102,888	1	102,888	.6	
39	199,076	2	99,538	-2.6	-5.2
40	95,715	1	95,715	-6.4	
41	100,861	1	100,861	-1.3	
42	113,955	1	113,955	11.5	
43	864,121	8	108,015	5.7	45.6
44	105,708	1	105,708	3.4	
45	93,853	1	93,853	-8.2	
46	84,216	1	84,216	-17.6	
47	103,717	1	103,717	1.5	
		95			694.3

Mean = 102,173

Average Deviation = $\frac{694.3}{95}$ = 7.3%

APPENDIX TABLE XI

PERCENT AVERAGE DEVIATION
Reapportioned Ohio House

106th Session, 1965

District	Population	Representatives	Population Per Representative	Percent Deviation	Dev. x Repr.
1	90,777	1	90,777	-11.2	
2	456,931	4	114,232	11.8	47.2
3	97,988	1	97,988	-4.1	
4	91,809	1	91,809	-10.2	
5	115,326	1	115,326	12.8	
6	217,500	2	108,750	6.4	12.8
7	1,647,895	17	96,935	-5.2	-88.4
8	148,700	1	148,700	45.5	
9	93,067	1	93,067	-9.0	
10	139,371	1	139,371	36.4	
11	208,526	2	104,263	2.0	4.0
12	98,809	1	98,809	-3.3	
13	106,101	1	106,101	3.8	
14	104,086	1	104,086	1.8	
15	513,569	5	102,713	.5	2.5
16	300,480	3	100,160	-2.0	-6.0
17	97,546	1	97,546	-4.6	
18	103,691	1	103,691	1.4	
19	111,502	1	111,502	9.1	
20	117,761	1	117,761	15.2	
21	97,088	1	97,088	-5.0	
22	340,345	3	113,448	11.0	33.0
23	107,004	1	107,004	4.7	
24	98,103	1	98,103	-4.0	
25	94,320	1	94,320	-7.7	
26	97,646	1	97,646	-4.5	
27	99,201	1	99,201	-3.0	
28	151,011	1	151,011	47.7	
29	131,440	1	131,440	28.6	
30	85,162	1	85,162	-16.7	
31	682,962	7	97,566	-4.6	-32.2
32	90,242	1	90,242	-11.7	
33	88,798	1	88,798	-13.1	
34	83,864	1	83,864	-18.0	

District	Population	Representatives	Population Per Representative	Percent Deviation	Dev. x Repr.
35	527,080	5	105,416	3.1	15.5
36	94,642	1	94,642	7.4	
37	111,944	1	111,944	9.5	
38	102,888	1	102,888	.6	
39	199,076	2	99,538	-2.6	-5.2
40	95,715	1	95,715	-6.4	
41	100,861	1	100,861	-1.3	
42	113,955	1	113,955	11.5	
43	864,121	9	96,013	-6.1	-54.9
44	105,708	1	105,708	3.4	
45	93,853	1	93,853	-8.2	
46	84,216	1	84,216	-17.6	
47	103,717	1	103,717	1.5	
		95			700.3

Mean = 102,173

Average Deviation = $\frac{700.3}{95}$ = 7.4%

APPENDIX TABLE XII

PERCENT AVERAGE DEVIATION
Reapportioned Ohio House

107th Session, 1967

District	Population	Representatives	Population Per Representative	Percent Deviation	Dev. x Repr.
1	90,777	1	90,777	-6.5	
2	456,931	4	114,232	17.6	70.4
3	97,988	1	97,988	.9	
4	91,809	1	91,809	-10.2	
5	115,326	1	115,326	18.8	
6	217,500	2	108,750	12.0	24.0
7	1,647,895	17	96,935	-.2	-3.4
8	148,700	2	74,350	-23.5	-47.0
9	93,067	1	93,067	-4.2	
10	139,371	2	69,685	-28.3	-56.6
11	208,526	2	104,263	7.4	14.8
12	98,809	1	98,809	1.7	
13	106,101	1	106,101	9.3	
14	104,086	1	104,086	7.2	
15	513,569	5	102,713	5.8	29.0
16	300,480	3	100,160	3.1	9.3
17	97,546	1	97,546	.4	
18	103,691	1	103,691	6.8	
19	111,502	1	111,502	14.8	
20	117,761	1	117,761	21.3	
21	97,088	1	97,088	.1	
22	340,345	4	113,448	16.8	67.2
23	107,004	1	107,004	10.2	
24	98,103	1	98,103	1.0	
25	94,320	1	94,320	-2.9	
26	97,646	1	97,646	.5	
27	99,201	1	99,201	2.2	
28	151,011	2	75,505	-22.3	-44.6
29	131,440	1	131,440	35.4	
30	85,162	1	85,162	-12.3	
31	682,962	7	97,566	.5	3.5
32	90,242	1	90,242	-7.1	
33	88,798	1	88,798	-8.6	
34	83,864	1	83,864	-13.6	

District	Population	Representatives	Population Per Representative	Percent Deviation	Dev. x Repr.
35	527,080	6	87,846	-9.5	-57.0
36	94,642	1	94,642	-2.5	
37	111,944	1	111,944	15.3	
38	102,888	1	102,888	6.0	
39	199,076	2	99,538	2.5	5.0
40	95,715	1	95,715	-1.4	
41	100,861	1	100,861	3.9	
42	113,955	1	113,955	17.4	
43	864,121	9	96,013	-1.1	-9.9
44	105,708	1	105,708	8.9	
45	93,853	1	93,853	-3.4	
46	84,216	1	84,216	-13.3	
47	103,717	1	103,717	6.8	
		100			716.6

Mean = 97,064

Average Deviation = $\frac{716.6}{100}$ = 7.2%

APPENDIX TABLE XIII

PERCENT AVERAGE DEVIATION
Reapportioned Ohio House

108th Session, 1969

District	Population	Representatives	Population Per Representative	Percent Deviation	Dev. x Repr.
1	90,777	1	90,777	-5.6	
2	456,931	5	91,386	-5.0	-25.0
3	97,988	1	97,988	1.9	
4	91,809	1	91,809	-4.5	
5	115,326	1	115,326	20.0	
6	217,300	2	108,750	13.1	26.2
7	1,647,895	17	96,935	.8	13.6
8	148,700	2	74,350	-22.7	-45.4
9	93,067	1	93,067	-3.2	
10	139,371	2	69,685	-27.5	-55.0
11	208,526	2	104,263	8.4	16.8
12	98,809	1	98,809	2.8	
13	106,101	1	106,101	10.4	
14	104,086	1	104,086	8.3	
15	513,569	5	102,713	6.8	34.0
16	300,480	3	100,160	4.2	12.6
17	97,546	1	97,546	1.5	
18	103,691	1	103,691	7.8	
19	111,502	1	111,502	16.0	
20	117,761	1	117,761	22.5	
21	97,088	1	97,088	1.0	
22	340,345	4	85,086	-11.5	-46.0
23	107,004	1	107,004	11.3	
24	98,103	1	98,103	2.0	
25	94,320	1	94,320	-1.9	
26	97,646	1	97,646	1.6	
27	99,201	1	99,201	3.2	
28	151,011	2	75,505	-21.5	-43.0
29	131,440	1	131,440	36.8	
30	85,162	1	85,162	-11.4	
31	682,962	7	97,566	1.5	10.5
32	90,242	1	90,242	- 6.1	

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District	Population	Representatives	Population Per Representative	Percent Deviation	Dev. x Repr.
33	88,798	1	88,798	-7.7	
34	83,864	1	83,864	-12.8	
35	527,080	6	87,846	-8.6	-51.6
36	94,642	1	94,642	-1.6	
37	111,944	1	111,944	-16.5	
38	102,888	1	102,888	7.0	
39	199,076	2	99,538	3.5	7.0
40	95,715	1	95,715	-.5	
41	100,861	1	100,861	4.9	
42	113,955	1	113,955	18.5	
43	864,121	9	96,013	-.1	-.9
44	105,708	1	105,708	9.9	
45	93,853	1	93,853	-2.4	
46	84,216	1	84,216	-12.4	
47	103,717	1	103,717	7.9	
		101			669.5

Mean = 96,103

Average Deviation = $\frac{669.5}{101}$ = 6.6%

APPENDIX TABLE XIV

PERCENT AVERAGE DEVIATION
Reapportioned Ohio House

109th Session, 1971

District	Population	Representatives	Population Per Representative	Percent Deviation	Dev. x Repr.
1	90,777	1	90,777	-7.5	
2	456,931	5	91,386	-6.8	-34.0
3	97,988	1	97,988	-.1	
4	91,809	1	91,809	-6.4	
5	115,326	1	115,326	17.6	
6	217,500	3	72,500	-26.1	-78.3
7	1,647,895	16	102,994	5.0	80.0
8	148,700	1	148,700	51.6	
9	93,067	1	93,067	-5.1	
10	139,371	1	139,371	42.1	
11	208,526	2	104,263	6.3	12.6
12	98,809	1	98,809	.7	
13	106,101	1	106,101	8.2	
14	104,086	1	104,086	6.1	
15	513,569	6	85,594	-12.7	-76.2
16	300,480	3	100,160	2.1	6.3
17	97,546	1	97,546	-.5	
18	103,691	1	103,691	5.7	
19	111,502	1	111,502	13.7	
20	117,761	2	58,880	-40.0	-80.0
21	97,088	1	97,088	-1.0	
22	340,345	3	113,448	15.7	47.1
23	107,004	1	107,004	9.1	
24	98,103	1	98,103	.1	
25	94,320	1	94,320	-3.8	
26	97,646	1	97,646	-.5	
27	99,201	1	99,201	1.1	
28	151,011	1	151,011	54.0	
29	131,440	2	65,720	-33.0	-66.0
30	85,162	1	85,162	-13.2	
31	682,962	7	97,566	-.5	-3.5
32	90,242	1	90,242	-8.0	

-2-

District	Population	Representatives	Population Per Representative	Percent Deviation	Dev. x Repr.
33	88,798	1	88,798	-9.5	
34	83,864	1	83,864	-14.5	
35	527,080	5	105,416	7.5	37.5
36	94,642	1	94,642	-3.5	
37	111,944	1	111,944	14.1	
38	102,888	1	102,888	4.9	
39	199,076	2	99,538	1.5	3.0
40	95,715	1	95,715	-2.4	
41	100,861	1	100,861	2.8	
42	113,955	1	113,955	16.2	
43	864,121	9	96,013	-2.1	-18.9
44	105,708	1	105,708	7.8	
45	93,853	1	93,853	-4.3	
46	84,216	1	84,216	-14.2	
47	103,717	1	103,717	5.7	
		99			897.9

Mean = 98,044

Average Deviation = $\frac{897.9}{99}$ = 9.1%

APPENDIX TABLE XV

CURRENT APPORTIONMENT OF OHIO HOUSE
For 1963-1972 Decennium

County	1960 Population	Seats	Population Per Seat	Percent Deviation	Weighted Dev. X Seats
Adams	19,982	1	19,982	-72	
Allen	103,691	1	103,691	48	
Ashland	38,771	1	38,771	-45	
Ashtabula	93,067	1	93,067	33	
Athens	46,998	1	46,998	-33	
Auglaize	36,147	1	36,147	-49	
Belmont	83,864	1	83,864	19	
Brown	25,178	1	25,178	-64	
Butler	199,076	2	198,538	40	80
Carroll	20,857	1	20,857	-70	
Champaign	29,714	1	29,714	-68	
Clark	131,440	1 1/5	109,533	56	72
Clermont	80,530	1	80,530	15	
Clinton	30,004	1	30,004	-57	
Columbiana	107,004	1	107,004	52	
Coshocton	32,224	1	32,224	-54	
Crawford	46,775	1	46,775	-33	
Cuyahoga	1,647,895	16 4/5	97,493	39	655
Darke	45,612	1	45,612	-35	
Defiance	31,508	1	31,508	-55	
Delaware	36,107	1	36,107	-49	
Erie	68,000	1	68,000	-03	
Fairfield	63,912	1	63,912	-09	
Fayette	24,775	1	24,775	-65	
Franklin	682,962	7	97,566	39	273
Fulton	29,301	1	29,301	-58	
Gallia	26,120	1	26,120	-63	
Geauga	47,573	1	47,573	-32	
[illegible]eene	94,642	1	94,642	35	
[illegible]uernsey	38,579	1	38,579	-45	
Hamilton	864,121	8 4/5	98,195	40	352
Hancock	53,686	1	53,686	-24	
Hardin	29,633	1	29,633	-58	
Harrison	17,995	1	17,995	-74	
Henry	25,392	1	25,392	-64	
Highland	29,716	1	29,716	-58	
Hocking	20,168	1	20,168	-71	
Holmes	21,591	1	21,591	-69	
Huron	47,326	1	47,326	-33	
Jackson	29,372	1	29,372	-58	
Jefferson	99,201	1	99,201	41	
Knox	38,808	1	38,808	-45	
Lake	148,700	1 2/5	106,214	51	71
Lawrence	55,438	1	55,438	-21	
Licking	90,242	1	90,242	28	
Logan	34,803	1	34,803	-50	
Lorain	217,500	2 1/5	98,863	41	90
Lucas	456,931	4 3/5	99,332	41	189

County	1960 Population	Seats	Population Per Seat	Percent Deviation	Weighted Dev. X Seats
Madison	26,454	1	26,454	-62	
Mahoning	300,480	3	100,160	43	129
Marion	60,221	1	60,221	-14	
Medina	65,315	1	65,315	-07	
Meigs	22,159	1	22,159	-68	
Mercer	32,559	1	32,559	-54	
Miami	72,901	1	72,901	04	
Monroe	15,268	1	15,268	-78	
Montgomery	527,080	5 2/5	97,607	39	211
Morgan	12,747	1	12,747	-82	
Morrow	19,405	1	19,405	-72	
Muskingum	79,159	1	79,159	13	
Noble	10,982	1	10,982	-84	
Ottawa	35,323	1	35,323	-50	
Paulding	16,792	1	16,792	-76	
Perry	27,864	1	27,864	-60	
Pickaway	35,855	1	35,855	-49	
Pike	19,380	1	19,380	-72	
Portage	91,798	1	91,798	31	
Preble	32,498	1	32,498	-54	
Putnam	28,331	1	28,331	-60	
Richland	117,761	1 1/5	98,134	40	48
Ross	61,215	1	61,215	-13	
Sandusky	56,486	1	56,486	-20	
Scioto	84,216	1	84,216	20	
Seneca	59,326	1	59,326	-16	
Shelby	33,586	1	33,586	-52	
Stark	340,345	3 2/5	100,101	43	146
Summit	513,569	5 1/5	198,763	41	213
Trumbull	208,526	2	104,263	48	96
Tuscarawas	76,789	1	76,789	09	
Union	22,853	1	22,853	-67	
Van Wert	28,840	1	28,840	-59	
Vinton	10,274	1	10,274	-85	
Warren	65,711	1	65,711	-06	
Washington	51,689	1	51,689	-26	
Wayne	75,497	1	75,497	07	
Williams	29,968	1	29,968	-57	
Wood	72,596	1	72,596	03	
Wyandot	21,648	1	21,648	-69	
TOTAL	9,706,397	138 1/5			5,979
MEAN			70,234		Avg. Dev. 43.5

APPENDIX MAP II

SENATORIAL DISTRICTS



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PAGE

APPORTIONMENT OF OHIO MEMBERS OF THE GENERAL ASSEMBLY—1963-1972

SENATORS

Population of State in 1960—9,706,397. Senatorial ratio—277,326; three-fourths ratio, 207,995; one and three-fourths ratio, 485,321; two ratios, 554,652; three ratios, 831,978; four ratios, 1,109,304.

District Number	County	Population	Total Population Senatorial District	Fraction	Five times Fraction	Regular Senators	Added by Fraction	105th—1963-64	106th—1965-66	107th—1967-68	108th—1969-70	109th—1971-72
1	Hamilton	864,121	864,121	32,143	160,715	3	..	3	3	3	3	3
2	Butler	199,076										
	Warren	65,711										
&	Total 2nd District		264,787									
4	Brown	25,178										
	Clermont	80,530										
	Total 4th District	105,708	370,495	93,169	465,845	1	1	1	1	1	1	2
3	Montgomery	527,080										
	Preble	32,498										
	Total 3rd District	559,578	559,578	4,926	24,630	2	..	2	2	2	2	2
5	Clinton	2[illegible],004										
	Fayette	24,775										
	Greene	94,642										
&	Total 5th District	149,421										
6	Highland	29,716										
	Ross	61,215										
	Total 6th District	90,931	240,352			1	..	1	1	1	1	1
7	Adams	19,982										
	Jackson	23,372										
	Pike	19,330										
&	Scioto	84,216										
	Total 7th District	152,950										
8	Gallia	26,120										
	Lawrence	55,438										
	Meigs	22,159										
	Vinton	10,274										
	Total 8th District	113,991	266,941			1	..	1	1	1	1	1

District Number	County	Population	Total Population Senatorial District	Fraction	Five times Fraction	Regular Senators	Added by Fraction	105th—1963-64	106th—1965-66	107th—1967-68	108th—1969-70	109th—1971-72
28	Holmes	21,591										
	Wayne	75,497										
	Total 28th District	97,088										
&												
18	Coshocton	32,224										
	Tuscarawas	76,789										
&	Total 18th District	109,013										
	Guernsey	38,579										
	Monroe (part)	14,924										
19	Noble (part)	3,677										
	Total 19th District	57,180	321,494	44,168	220,840	1	..	1	1	1	1	1
20	Belmont	83,864										
	Harrison	17,995										
	Total 20th District	101,859										
&												
22	Columbiana	107,001										
	Jefferson	99,201										
	Total 22nd District	206,205	308,064	30,738	153,690	1	..	1	1	1	1	1
21	Carroll	20,857										
	Stark	340,345										
	Total 21st District	361,202	361,202	83,876	419,380	1	1	1	1	1	1	2
23	Mahoning	300,480										
	Trumbull	208,526										
	Total 23rd District	509,006	509,006			2	..	2	2	2	2	2

9	Athens	46,998												
	Fairfield	63,912												
	Hocking	20,168												
&	Total 9th District	131,078												
	Monroe (part)	344												
14	Morgan	12,747												
	Noble (part)	7,305												
	Washington	51,689												
	Total 14th District	72,085							*1					
&														
	Muskingum	79,159												
15	Perry	27,864												
	Total 15th District	107,023												
&														
	Delaware	36,107												
16	Licking	90,242												
	Total 16th District	126,349	436,535	159,209	796,045	1	2	1	1	2	2	1		
	Franklin	682,962												
10	Pickaway	35,855												
	Total 10th District	718,817	718,817	164,166	820,825	2	2	2	2	3	3	2		
	Champaign	29,714												
11	Clark	131,440												
	Madison	26,454												
	Total 11th District	187,608												
&														
	Darke	45,612												
12	Miami	72,901												
	Shelby	33,586												
	Total 12th District	152,099	339,707	62,331	811,905	1	1	1	1	1	1	2		
	Hardin	20,633												
13	Logan	34,803												
	Marion	60,221												
	Union	22,853												
	Total 13th District	147,510												
	Crawford	46,775												
31	Seneca	59,326												
	Wyandot	21,648												
	Total 31st District	127,749	275,259	.....	.....	1	..	1	1	1	1	1		
	Knox	38,808												
17	Morrow	19,405												
&														
	Total 17th District	58,213												
24	Ashtabula	93,067												
	Geauga	47,573												
	Lake	148,700												
	Total 24th District	289,340												
&														
	Portage	91,798												
26	Total 26th District	91,798	381,138	103,812	512,060	1	1	1	1	1	1	2		
25	Cuyahoga	1,647,895												
	Total 25th District	1,647,895	1,647,895	261,265	1,306,305	5	4	6	6	6	6	5		
27	Lorain	217,500												
	Medina	65,315												
	Total 27th District	282,815												
&														
29	Ashland	38,771												
	Richland	117,761												
	Total 29th District	156,532	439,347	162,021	810,105	1	2	1	1	2	2	1		
30	Erie	68,600												
	Huron	47,326												
	Ottawa	35,323												
	Sandusky	56,486												
&	Total 30th District	207,135												
33	Fulton	29,301												
	Hancock	53,686												
	Henry	25,392												
	Putnam	28,331												
	Wood	72,596												
	Total 33rd District	209,306	416,441	139,115	696,575	1	2	1	1	2	2	1		
	Allen	103,691												
	Auglaize	36,147												
	Defiance	31,508												
	Mercer	32,559												
32	Paulding	16,792												
	Van Wert	28,840												
	Williams	29,968												
	Total 32nd District	279,505	279,505	2,179	10,895	1	..	1	1	1	1	1		
	Lucas	456,931												
34	Total 34th District	456,931	456,931	179,606	898,025	1	3	2	2	2	1	1		
	Summit	513,569												
35	Total 35th District	513,569	513,569	.....	.....	2	..	2	2	2	2	2		
	Totals	.....	9,706,397	.....	.....	30	19	23	32	36	35	34		

* The incumbent senator elected from the ninth and fourteenth district at the general election held on November 8, 1960 for a four year term will continue as a member of the senate during the first session of the decennial period.

APPENDIX TABLE XVII

Minimum Percentage Needed To Elect A Majority (85) in Reapportioned Ohio Senate

Decennium, 1963-71

District	Senators	Population Per Senator	District Population
5	5	240,352	1,201,760
23	10	254,503	2,545,030
35	10	256,785	2,567,850
7	5	266,941	1,334,705
13	5	275,259	1,376,295
32	5	279,505	1,397,525
3	10	279,789	2,797,890
11	5	283,089	1,415,445
25	29	284,119	8,239,451
34	2	285,582	5,711,164
	86		23,447,115

Percent of state's population needed to elect majority = $\frac{23,447,115}{48,531,985}$ = 48.3%

APPENDIX TABLE XVIII

Minimum Percentage Needed To Elect A Majority (17) in Reapportioned Ohio Senate

105th Session, 1963

District	Senators	Population Per Senator	District Population
9	2	218,268	436,536
34	2	228,466	456,932
3	2	229,789	459,578
5	1	240,352	240,352
23	2	254,503	509,003
35	2	256,785	513,570
7	1	266,941	266,941
25	6	274,649	1,647,894
	17		4,256,157

Percent of state's population needed to elect majority = $\frac{4,256,157}{9,706,397}$ = 43.8%

APPENDIX TABLE XIX

Minimum Percentage Needed To Elect
A Majority (17) in Reapportioned Ohio Senate

106th Session, 1965

District	Senators	Population Per Senator	District Population
34	2	228,466	456,932
3	2	229,789	459,578
5	1	240,352	240,352
23	2	254,503	509,006
35	2	256,785	513,570
7	1	266,941	266,941
25	6	274,649	1,647,894
13	1	275,259	275,259
	17		4,369,532

Percent of state's population needed to elect majority $= \frac{4,369,532}{9,706,397} = 45.0\%$

APPENDIX TABLE X X

Minimum Percentage Needed To Elect
A Majority (19) in Reapportioned Ohio Senate

107th Session, 1967

District	Senators	Population Per Senator	District Population
30	2	208,221	416,442
9	2	218,268	436,536
27	2	219,674	439,348
34	2	228,466	456,932
3	2	229,789	459,578
10	3	239,606	718,818
5	1	240,352	240,352
23	2	254,503	509,006
35	2	256,785	513,570
7	1	266,941	266,941
	19		4,457,523

Percent of state's population needed to elect majority $= \frac{4,457,523}{9,706,397} = 45.9\%$

APPENDIX TABLE XXI

Minimum Percentage Needed To Elect
A Majority (18) in Reapportioned Ohio Senate

108th Session, 1969

District	Senators	Population Per Senator	District Population
30	2	208,221	416,442
9	2	218,268	436,536
27	2	219,674	439,348
3	2	229,789	459,578
10	3	239,606	718,818
5	1	240,352	240,352
23	2	254,503	509,006
35	2	256,785	413,570
7	1	266,941	266,941
25	1	274,649	274,649
	18		4,175,240

Percent of state's population needed to elect majority = $\frac{4,175,240}{9,706,397}$ = 43.0%

APPENDIX TABLE XXII

Minimum Percentage Needed To Elect
A Majority (18) in Reapportioned Ohio Senate

109th Session, 1971

District	Senators	Population Per Senator	District Population
2	2	135,248	270,496
11	2	169,854	339,708
21	2	185,601	371,202
24	2	190,569	381,138
3	2	229,789	459,578
5	1	240,352	240,352
23	2	254,503	509,006
35	2	256,785	513,570
7	1	266,941	266,941
13	1	275,259	275,259
32	1	279,505	279,505
	18		3,906,755

Percent of state's population needed to elect majority = $\frac{3,906,755}{9,706,397}$ = 40.2%

APPENDIX TABLE XXIII

POPULATION-RATIO VARIANCE
Reapportioned Ohio Senate

(All Districts Compared with Smallest District)*

District	Sessions					
	105th	106th	107th	108th	109th	Decennium
1	1.3	1.3	1.4	1.4	2.1	1.2
2 & 4	1.7	1.6	1.8	1.8	1.0	1.3
3	1.1	1.0	1.1	1.1	1.7	1.2
5 & 6	1.1	1.1	1.2	1.2	1.8	1.0
7 & 8	1.2	1.2	1.3	1.3	2.0	1.1
9, 14, 15 & 16	1.0	1.9	1.0	1.0	3.2	1.3
10	1.6	1.6	1.2	1.2	2.7	1.2
11 & 12	1.6	1.5	1.6	1.6	1.3	1.2
13 & 31	1.3	1.2	1.3	1.3	2.0	1.1
17, 18, 19 & 28	1.5	1.4	1.5	1.5	2.4	0.1
20 & 22	1.4	1.3	1.5	1.5	2.3	1.3
21	1.7	1.6	1.7	1.7	1.4	1.3
23	1.2	1.1	1.2	1.2	1.9	1.1
24 & 26	1.7	1.7	1.8	1.8	1.4	1.3
25	1.3	1.2	1.3	1.3	2.4	1.2
27 & 29	2.0	1.9	1.1	1.1	3.2	1.3
30 & 33	1.9	1.8	1.0	1.0	3.1	1.2
32	1.3	1.2	1.3	1.3	2.1	1.2
34	1.0	1.0	1.1	2.2	3.4	1.2
35	1.2	1.1	1.2	1.2	1.9	1.1

*Smallest District

105th	9th	218,268 per seat
106th	34th	228,466 per seat
107th	30th	208,221 per seat
108th	30th	208,221 per seat
109th	2nd	135,248 per seat
Decennium	5th	240,352 per seat

APPENDIX TABLE XXIV

PERCENT AVERAGE DEVIATION
Reapportioned Ohio Senate

Decennium 1963-71

District	Population	Senators	Per Senator	Deviation	Dev. x Sen.
1	864,121	15	288,040	-.3	-4.5
2 & 4	370,495	6	308,745	6.9	41.4
3	559,578	10	279,789	-3.1	-31.0
5 & 6	240,352	5	240,352	-16.8	-84.0
7 & 8	266,941	5	266,941	-7.6	-38.0
9, 14, 15 & 16	436,535	7	311,811	7.9	55.3
10	718,817	12	299,507	3.7	44.4
11 & 12	339,707	5	283,089	-2.0	-10.0
13 & 31	275,259	5	275,259	-4.7	-23.5
17, 18, 19 & 28	321,494	5	321,494	11.3	56.5
20 & 22	308,064	5	308,064	6.6	33.0
21	361,202	6	301,002	4.2	25.2
23	509,006	10	254,503	-11.9	-119.0
24 & 26	381,138	6	317,615	9.9	59.4
25	1,647,895	29	284,119	-1.6	-46.4
27 & 29	439,347	7	313,819	8.6	60.2
30 & 33	416,441	7	297,458	3.0	21.0
32	279,505	5	279,505	-3.2	-16.0
34	456,931	8	285,582	-1.1	-8.8
35	513,569	10	256,785	-11.1	-111.0
		168			888.6

Average Deviation = $\frac{888.6}{168}$ = 5.3%

APPENDIX TABLE XXV

PERCENT AVERAGE DEVIATION
Reapportioned Ohio Senate

105th Session, 1963

District	Population	Senators	Population Per Senator	Percent Deviation	Dev. x Sen.
1	864,121	3	288,040	-2.1	-3.6
2 & 4	370,495	1	370,495	26.0	
3	559,578	2	229,789	-21.9	-43.8
5 & 6	240,352	1	240,352	-18.3	
7 & 8	266,941	1	266,941	-9.2	
9, 14, 15 & 16	436,535	2	218,268	-25.8	-51.6
10	718,817	2	359,409	22.2	44.4
11 & 12	339,707	1	339,707	15.5	
13 & 31	275,259	1	275,259	-6.4	
17, 18 19 & 28	321,494	1	321,494	9.3	
20 & 22	308,064	1	308,064	4.7	
21	361,202	1	361,202	22.8	
23	509,006	2	254,503	-13.5	-27.0
24 & 26	381,138	1	381,138	29.6	
25	1,647,895	6	274,649	-6.6	-39.6
27 & 29	439,347	1	439,347	49.4	
30 & 33	416,441	1	416,441	41.6	
32	279,505	1	279,505	-5.0	
34	456,931	2	228,466	-22.3	-44.6
35	513,569	2	256,785	-12.7	-25.4
		33			517.8

Average Deviation = $\frac{517.8}{33} = 15.6\%$

APPENDIX TABLE XXVI

PERCENT AVERAGE DEVIATION
Reapportioned Ohio Senate

106th Session, 1965

District	Population	Senators	Population Per Senator	Percent Deviation	Dev. x Sen.
1	864,121	3	288,040	-5.1	-15.3
2 & 4	370,495	1	370,495	22.1	
3	559,578	2	229,789	-24.2	-48.4
5 & 6	240,352	1	240,352	-20.1	
7 & 8	266,941	1	266,941	-12.0	
9, 14, 15 & 16	436,535	1	436,535	43.9	
10	718,817	2	359,409	18.5	37.0
11 & 12	339,707	1	339,707	12.0	
13 & 31	275,259	1	275,259	-9.3	
17, 18, 19 & 28	321,494	1	321,494	6.0	
20 & 22	308,064	1	308,064	1.6	
21	361,202	1	361,202	19.1	
23	509,006	2	254,503	-16.1	-32.2
24 & 26	381,138	1	381,138	25.7	
25	1,647,895	6	274,649	-9.5	-57.0
27 & 29	439,347	1	439,347	44.8	
30 & 33	416,441	1	416,441	37.3	
32	279,505	1	279,505	-7.9	
34	456,931	2	228,466	-24.7	-49.4
35	513,569	2	256,785	-15.3	-30.6
		32			531.7

Average Deviation = $\frac{531.7}{32}$ = 16.6%

APPENDIX TABLE XXVII

PERCENT AVERAGE DEVIATION
Reapportioned Ohio Senate

107th Session, 1967

District	Population	Senators	Population Per Senator	Percent Deviation	Dev. x Sen.
1	864,121	3	288,040	6.8	20.4
2 & 4	370,495	1	370,495	37.4	
3	559,578	2	229,789	-14.8	-29.6
5 & 6	240,352	1	240,352	-10.9	
7 & 8	266,941	1	266,941	-1.0	
9, 14, 15 & 16	436,535	2	218,268	-19.0	-38.0
10	718,817	3	239,606	-11.1	-33.3
11 & 12	339,707	1	339,707	26.0	
13 & 31	275,259	1	275,259	2.1	
17, 18, 19 & 28	321,494	1	321,494	19.2	
20 & 22	308,064	1	308,064	14.2	
21	361,202	1	361,202	34.0	
23	509,006	2	254,503	-5.6	-11.2
24 & 26	381,138	1	381,138	41.4	
25	1,647,895	6	274,649	1.9	11.4
27 & 29	439,347	2	219,674	-18.5	-37.0
30 & 33	416,441	2	208,221	-22.8	-45.6
32	279,505	1	279,505	3.7	
34	456,931	2	228,466	-15.3	-30.6
35	513,569	2	256,785	-4.8	-9.6
		36			456.6

Average Deviation = $\frac{456.6}{36}$ = 12.6 %

APPENDIX TABLE XXVIII

PERCENT AVERAGE DEVIATION
Reapportioned Ohio Senate

108th Session, 1969

District	Population	Senators	Population Per Senator	Percent Deviation	Dev. x Sen.
1	864,121	3	288,040	3.9	11.7
2 & 4	370,495	1	370,495	33.6	
3	559,578	2	229,789	-17.1	-34.2
5 & 6	240,352	1	240,352	-13.3	
7 & 8	266,941	1	266,941	-3.7	
9, 14, 15 & 16	436,535	2	218,268	-21.3	-42.6
10	718,817	3	239,606	-13.6	-40.8
11 & 12	339,707	1	339,707	22.5	
13 & 31	275,259	1	275,259	-.7	
17, 18, 19 & 28	321,494	1	321,494	15.9	
20 & 22	308,064	1	308,064	11.1	
21	361,202	1	361,202	30.2	
23	509,006	2	254,503	-8.2	-16.4
24 & 26	381,138	1	381,138	37.4	
25	1,647,895	6	274,649	-1.0	-6.0
27 & 29	439,347	2	219,674	-20.1	-40.2
30 & 33	416,441	2	208,221	-24.9	-49.8
32	279,505	1	279,505	.8	
34	456,931	1	456,931	64.8	
35	513,569	2	256,785	-7.4	-14.8
		35			490.5

Average Deviation = $\frac{490.5}{35}$ = 14.1 %

APPENDIX TABLE XXIX

PERCENT AVERAGE DEVIATION
Reapportioned Ohio Senate

109th Session, 1971

District	Population	Senators	Population Per Senator	Percent Deviation	Dev. x Sen.
1	864,121	3	288,040	.9	2.7
2 & 4	370,495	2	135,248	-52.6	-105.2
3	559,578	2	229,789	-19.5	-39.0
5 & 6	240,352	1	240,352	-15.9	
7 & 8	266,941	1	266,941	-6.5	
9, 14, 15 & 16	436,535	1	436,535	52.9	
10	718,817	2	359,409	25.9	51.8
11 & 12	339,707	2	169,854	-40.5	-81.0
13 & 31	275,259	1	275,259	-3.6	
17, 18, 19 & 28	321,494	1	321,494	12.6	
20 & 22	308,064	1	308,064	7.9	
21	361,202	2	185,601	-35.0	-70.0
23	509,006	2	254,503	-10.9	-21.8
24 & 26	381,138	2	190,569	-33.2	-66.4
25	1,647,895	5	329,579	15.4	77.0
27 & 29	439,347	1	439,347	53.9	
30 & 33	416,441	1	416,441	45.9	
32	279,505	1	279,505	-2.1	
34	456,931	1	456,931	60.1	
35	513,569	2	256,785	-10.1	-20.2
		34			796.5

Average Deviation = $\frac{796.5}{34}$ = 23.5%

APPENDIX TABLE XXX

Inverse Coefficient of Variation

Reapportioned Ohio House (Appendix Table I)	ICV
Decennium: 1963-71	.950
Sessions:	
105th - 1963	.902
106th - 1965	.902
107th - 1967	.906
108th - 1969	.910
109th - 1971	.876
Ohio Senate	
Decennium: 1963-71	.936
Sessions:	
105th - 1963	.838
106th - 1965	.835
107th - 1967	.859
108th - 1969	.838
109th - 1971	.773